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The Technology Review

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No. 3.

A SANE ATHLETIC POLICY

The Ideal Conditions existing at the Institute—Technology a Pioneer in a Movement affecting the Athletic Policy of All Colleges

The results of the present athletic policy of the Institute of Technology have been so positively beneficial as to attract the general attention of sister institutions. This policy is one which tends to advance the physical development of the entire student body, and adapting, as it does, the degree and the extent of exercise to the individual demands of the students, it is producing a student body with improved physique and a greater capacity for mental work. The tendency of this policy is to produce athletic students rather than student athletes, to make athletics a healthful exercise rather than an absorbing business.

Up to a comparatively recent period, athletics was not an important or successful feature of Institute life, but, wherever American youth is found, the love of athletic sports is always present, and so, notwithstanding the numerous obstacles, such as faculty restrictions, long hours in lecture-room and laboratory, lack of direction in physical training and irresponsible student management, intercollegiate athletics existed and fared more or less successfully for a number of years. As the body of students became larger and as the interest in athletic sports increased, it became plainly evident that it was impossible to carry on the educational work of the Institute with athletics as a competitor. It was at this time that the present athletic policy was formulated and almost immediately adopted.

President Walker fully appreciated the necessity for wholesome regular exercise in connection with the strenuous work of

the Institute, and, although he met with much opposition, his recommendations were tactfully made, and gradually the Faculty looked upon athletics in a more tolerant attitude. President Pritchett took up the problem with energy, purpose and determination, and through his efforts the present athletic policy was developed.

The constructive work of these two educators, with their far-seeing appreciation of the necessity for careful physical direction, led to the formation of a committee on physical training made up of members of the Faculty and alumni, which first met in 1897. As a result of its deliberations, an advisory athletic council was formed, composed of four past students and three undergraduates, with no Faculty representation on the committee.

This council, which has to do with the expenditures, the management of athletic contests, the supervision of schedules and granting of insignia, in fact, the entire athletic policy, at first met with undergraduate opposition. The various departments of sport had been run independently, and it was no small task to demonstrate the wisdom of centralized management. Few are aware of the untiring and unselfish services of its chairman, whose well-directed efforts have brought about such a desirable condition in the department of athletic sports.

It was in 1902 that intercollegiate football was abolished, and baseball has long since passed out of Institute life as an intercollegiate sport. We are presenting a greater percentage of intermural activities, or competitions between individuals or teams within our own walls, than is to be found in any of the colleges. This plan, while it encourages sport, does not permit the fever of excitement, met with in so many institutions during championship intercollegiate contests, to demoralize the entire student body. The tendency now in all colleges, especially in the eastern states, is to reduce the number of intercollegiate contests, and for the last two or three years representatives of the New England colleges, Yale excepted, have met and deliberated on this problem. It is a matter of congratulation that the Institute had established its policy along these lines long before the question became a general one. One has but to read what President Wilson has to say of the state of affairs at Princeton, what the Columbia authorities are discussing and what Mr. Garcelon of Harvard is doing, all within a few months, to fully appreciate

the importance of the problem and the pioneer work the Institute has done in anticipating just such a state of affairs.

Class rivalry at the Institute has always been keen, especially between the sophomores and freshmen, where baseball, football and a cane rush were annual features. A fatality during the cane rush in 1900 resulted in abolishing the annual rush, which for years provided the exciting feature of the day following the football game. It was in 1901 that the present Field Day program was inaugurated. This event, receiving, as it does, the generous recognition of both the Corporation and the Faculty, brings together in wholesome rivalry fifty men in the tug-of-war contest, twenty-four in the relay race, and about thirty in the football game. Here, then, are represented over one hundred men of the two lower classes. Many others not chosen on the teams are benefited through practice and training, though having failed to make the various teams, and it is safe to say that one hundred and fifty men take an active part in the class rivalry incident to the Field Day competition. This contemplates only the two lower classes and includes only the men who go out for Field Day events. The number of men really interested in some form of minor sport is largely on the increase, and those who are not to some extent actively identified with some form of healthful sport are obliged to take the course in physical training under competent instructors.

A very careful examination of students entering athletics is insisted upon, and no candidate failing to fully meet the requirements is allowed to indulge in competitive sports, but is given exercise according to his limitations.

The financing of the Institute athletics is fully as much of a problem as it ever has been. The approximate expense is from \$3,500 to \$4,000 annually, the principal items being the care of the Tech field in Brookline, the salary of the coach and the expenses of cross-country, hockey, basket-ball and tennis teams. The Corporation allows the council \$1,600, and the net proceeds from Field Day approximate about \$300 annually. When the New England intercollegiate meets are held, there is usually some small income from gate receipts. It has been the custom for the management of the Tech Show to turn over the net proceeds to the Athletic Council, but the fluctuation of this revenue has been so great as to cause considerable distress in the financing of athletics. The Tech Show of 1906 turned over \$1,500, whereas

the Show of 1909 gave \$450. There will be some \$800 or \$900 revenue from the 1910 Show, part of which has already been turned over.

In order to interest the alumni as well as the undergraduates, the season ticket plan was conceived by the undergraduates, the idea of this being that each ticket, costing \$3, should admit the holder to all events held under the control of the Advisory Council. It was anticipated that the alumni would subscribe generously to this plan, but, unfortunately, this has not been the case. Forty out of about two thousand to whom circulars were sent availed themselves of this privilege to help athletic sports. The undergraduate subscription was much more generous, but, all told, less than two hundred tickets were disposed of. If we are to continue our athletic policy, we must have hearty co-operation from the alumni.

About two years ago the undergraduates, seeing that the relations between the different teams were not on a satisfactory basis, reorganized the M. I. T. A. A., which previously concerned itself only with track affairs and which comprised all the undergraduates. The managers, the captains of teams and delegates from each class were elected to the Athletic Association, which became the undergraduate governing body over all the athletic interests. This change has proved of great advantage, for all matters emanating from undergraduates are brought before the Athletic Association first, and, if approved, are forwarded to the Advisory Council on Athletics with recommendations. It will thus be seen that the M. I. T. A. A. stands as an intermediary between the Advisory Council on Athletics and the undergraduate body, and has effectively relieved the council of many details.

After an experience of twelve years under the general plan above described, Technology stands to-day for the cleanest and most honorable methods of sport, and there has never been a question as to the amateur standing of its representatives. During the past season a distinct advance has been made in our athletic standing. The feeling expressed by other colleges is that we are on a higher plane than ever before, and our membership in the Intercollegiate Association of Amateur Athletes of America, coupled with the success of our cross-country team, has done much to augment this.

To sum up our present athletic status:—

We have a suitable gymnasium with ample floor space for gym-

nastic drills, a banked running track, locker and shower-bath facilities.

Tech field with its quarter-mile track is equal to any in New England. It has a 220-yard straight-a-way course, football and baseball fields, tennis courts, grand stands, locker and dressing-rooms and shower baths.

The present athletic coach has shown marked ability in outdoor work, under adverse conditions, and this year was made athletic instructor, having entire charge of the physical development of the students, and is a man respected and admired by all.

We now have interested faculty co-operation.

The cross-country and relay teams have for years been acknowledged among the first of the country. In minor sports the various teams stand well above the average, and up to the period of examination time they are usually near the top.

The most gratifying feature, however, is the growth of the intermural idea in eliminating, as it does, undesirable features incident to intercollegiate sports and creating good fellowship and a wholesome rivalry which can be developed in no other way.

We are led to believe that our present scheme of organization and our athletic policy are justified by the results which have been obtained. There can, of course, be no question as to the necessity for rational physical exercise, and the development of competitive sports *within the student body* almost entirely eliminates any serious apprehension that physical training may be too prolonged or too strenuous. Allowance should be made in the tabular view of every student, not only of the entering class, but of all classes, to enable him to give one or two hours tri-weekly to physical exercise. The Athletic Council has always strenuously opposed any form of physical exercise wherein even for a few men the necessary training is such as to approach that danger line which divides rational physical exercise from the excessive strain of intercollegiate contests. We believe that, when the alumni realize the fortunate position of Institute athletics to-day, they will not only feel pride in this condition, but will assist in financing the enterprise heartily. The intellectual, social and moral growth of the Institute is more dependent upon the perfectly developed man than on any other element in the whole scheme of its education.

J. ARNOLD ROCKWELL, M.D., '96.

A STUDY IN STUDENT INITIATIVE

Student Government at Technology—The Development of the Institute Committee into an Undergraduate Legislature—The New Finance Committee will safeguard the Credit of Tech Activities

As pointed out in the last issue of the REVIEW, important changes have been taking place in the student body, affecting the relations of the Institute Committee to the separate student activities. As a result, the dream of student leaders for seventeen years has finally been realized, and the Institute Committee has evolved into a student legislative body, with recognized authority to enforce its rulings. So full of promise for a better-managed, saner, healthier, and more healthful student society is this new condition that an account of the development of the Institute Committee and of its present status at Technology cannot but be of some interest to all interested in student welfare.

In December, 1892, an important communication from the executive committee of the class of 1893 appeared in *The Tech*, then a weekly publication. This communication called attention to the lack of any organization which might be truly said to represent the entire student body, and rightly attributed to this cause the fact that many important matters, merely because they did not directly concern any particular student activity, were not receiving the attention they deserved. To remedy this defect, they proposed an Institute Committee, to be composed of representatives from each of the classes, and on Feb. 11, 1893, a body chosen in this way met for the first time. This first meeting was largely taken up with extended discussion of the aims and powers of the committee, and it is interesting to note that one of the members at that time expressed the belief that the committee might some day take the position of a student senate, and not only represent, but also govern, the student body. This was not then considered feasible, and the aim and jurisdiction of the committee at that time were well expressed in the

first Institute Committee heading which appeared in *Technique*—1894: "The Institute Committee is the recognized representative of the entire student body. Its aim is to promote in all matters the welfare of the students."

For many years this limited jurisdiction was adhered to. The Institute Committee, composed of the presidents and two elected representatives of each class, continued to represent the student body and to show considerable activity by resolutions, petitions to the Faculty, etc. Among its accomplishments in this period of its development were the appointment of correspondents to newspapers in New York and other cities, the selection of the well-known triangular design for an Institute pin, recommendation to the student body of the abolition of the cane rush, petitions to the Faculty for bulletin boards, for tables for the accommodation of students bringing luncheon from home, etc.

But these duties were not sufficient to make a busy, responsible body of the Institute Committee, and after nine or ten years it lapsed into "innocuous desuetude." For several years its accomplishments were even less noteworthy than before, and in some instances meetings were held but two or three times yearly. During this period the commonly accepted idea of the Institute Committee might have been (and frequently was) expressed somewhat as follows: "The Institute Committee is an honorary association of class representatives. Its aim is to meet once a year at a photographer's to have its picture taken for *Technique*."

Such a condition could not last. The need of an active body to correct some of the glaring faults of student society became more and more apparent, and in May, 1908, a thorough reorganization was effected. A new constitution was adopted, and the membership increased by the addition of the presidents of the Athletic Association and of the Christian Association, the general manager of the Tech Show, of *The Tech*, and of the Musical Clubs, the editor-in-chief of *Technique* and the presidents of the eight professional societies. The new constitution provided also for an executive committee of five carefully chosen upper-class men, who meet weekly to keep in touch with every branch of student life, and who present matters to the Institute Committee in form suitable for action.

These changes have developed a new spirit of activity and responsibility in the members of the committee and a greater inter-

est in its doings on the part of the students than ever before. Its widely representative membership has given the student activities greater confidence in its fairness, so that it has been able for the first time to develop the new function of student government. The Institute Committee is still the recognized representative of the entire student body. Its aim is still to promote in all matters the welfare of the students, but it works toward this end no longer by resolutions and petitions, but by actual legislation and active administration. It has become a true student senate, with a real control over all student activities.

The first step in this new direction was the adoption in October, 1908, of the then novel, but now well-known, point system. This plan struck directly at one of the most serious faults of student society,—the loading of honors and duties on a few individuals to the exclusion of all others and to the almost certain destruction of the favored ones' chances of graduation. The scheme assigned a number of points, from one to ten, according to the responsibility of the position, to every student office, and limited the total number of offices to be held by one man to ten points. These regulations have been enforced by a sub-committee of the Institute Committee, and have undoubtedly accomplished much good in preventing over-indulgence in student social life and in attracting more and more men into student activities. It has been used as a model for similar schemes since adopted by many colleges and preparatory schools throughout the country.

At the beginning of the new régime the new Union was built and turned over to the students. It is controlled by a Union Committee, which reports monthly to the Institute Committee. Sub-committees of the Union Committee oversee the management of the dining-room, regulate the use of the social rooms and offices, and furnish weekly entertainments for the students, all reporting weekly to the Union Committee, and through it monthly to the Institute Committee.

Another sub-committee of the Institute Committee regulates the use of the new bulletin boards, still another enforces the "point system," and special committees appointed from time to time make investigations and reports, and confer with members of Faculty or alumni, as desired.

Probably the most far-reaching of the results of this new activity, and the most potent for good, was the adoption in May,

1910, of a measure creating a finance commission to oversee the financial management of the activities handling considerable sums of money. So important is this action, taken after nearly two years of discussion and deliberation, that the measure is given below in full:—

Two representatives from each activity with the elected members of the Institute Committee shall constitute a committee to elect the finance commission for each year. The committee shall be known as the electoral committee. The president of the Institute Committee shall be the presiding officer. The finance commission will be concerned with the following Institute activities: the classes, Tech Show, *Technique*, *The Tech*, Musical Clubs, Tech Christian Association, Athletic Association, the Union, the Wireless and Aero Clubs, Institute Committee, Class Day Committee, Prom Committee and Portfolio Committee.

The finance commission shall be composed of two non-student members together with the president of the Institute Committee *ex officio*.

The commission shall hold monthly meetings during the college year. Special meetings may be called by the chairman.

Every activity named above shall draw up and mail to the secretary of the finance commission in the first seven days of each month a report of the finances to the close of the month preceding.

The commission shall make such suggestions on the drawing up of these reports as will lead to unification and simplification.

Auditing of the books of the activities may be directed by the commission at any time it may deem necessary on account of a bad state of affairs.

Power of finance commission. The finance commission shall have the power to insist upon a clear, business-like financial report from the activities before the 7th of the month for the month preceding. The report shall cover the following items: cash on hand the first month, expenditures and liabilities, receipts and assets and balance on hand at end of month.

The finance commission shall have the power to audit the accounts of any activity when it thinks such action is necessary.

If the financial condition of any activity is such that in the opinion of the finance commission the activity will not be able to pay any debt incurred, the finance commission shall have the

power to insist upon some guarantee from the activity that the amount to cover such indebtedness is raised.

This plan is aimed at another very serious fault of the student activities,—the careless handling of funds, incomplete or improper methods of accounting, and a habit of contracting debts without the means to pay them. This condition has very frequently been the cause either of a serious drain on the pocket-books of the students interested in the activity, or else of non-payment of debts, so that many printers and others have been given the worst impression of Technology students.

The results that this plan is expected to accomplish are chiefly three: first, by insisting on clear monthly reports, and the proper methods of accounting necessary for them, it will allow every manager to know definitely at all times just where he stands instead of being willing to rely on guesses, as has been too often the case; second, by demanding in advance a guarantee of payment of debts, where a deficit is foreseen, it will prevent any recurrence of non-payment of debts, and thus give much needed protection to the good name of the Institute; and, third, by giving the students the advice and oversight of experienced business men, it will make the business training obtained through management of student activities always of real value instead of being often a positive influence for bad.

The final important step during the past year in establishing the Institute Committee firmly in a position of authority was the decision of the Tech Show management to turn over to the Institute Committee, for distribution, in the interests of student activities, its entire profits of nearly nine hundred dollars. This gives a new hold on student interests, for no activity that does not conform rigidly to the point system and to the regulations of the finance commission can reasonably expect any aid from this fund.

It is clear from the ratification of these bold measures by the student activities that the Institute Committee has earned the confidence of the students, and that it is in a position to carry into operation any of its rulings.

What the future development of student government at Technology may bring forth, probably no one can now foresee, but a guess from one who is much interested cannot be entirely out of place. The executive committee will continue to be com-

posed of responsible upper-class men, who will devote practically all their spare time and energy to searching out faults in student society; for their position counts nine points under the point system. The Institute Committee will pass and enforce measures fairly designed to correct these faults. The rigid enforcement of the "point system" will make room for more and more men in the active conduct of student activities, will decrease to a minimum the annual crop of failures due to excessive indulgence in student life and will make possible increased efficiency in student management.

The supervision of the finance commission will make it impossible for any activity to contract a very large deficit. On the other hand, it should make it possible for *The Tech*, *Technique* and the Musical Clubs to complete their seasons generally with a balance on the right side. These activities, and some of the professional societies that are troubled with an annual surplus, will probably follow the lead of Tech Show, and contribute to the general fund for the benefit of student activities. This fund will make possible better support of athletics than ever before. It will allow improvements as needed in the offices and other arrangements used by the managements of the student activities; and, where activities have followed strictly the regulations of the finance commission, administered their affairs efficiently and honestly, and still come out with a small deficit, the fund will prevent the necessity of making this up out of the pockets of the students interested. Moreover, men will be turned out on graduation with a business training of the best kind instead of having contracted business habits actually damaging to their chances for success.

Above all, the centralization of student government is developing a feeling of co-operation and unity among the students, and thus fostering a loyalty to the Institute that will prove its value in future years. The college world watches with interest this experiment in government of the students, by the students and for the students. The Faculty, Corporation and alumni stand ready at all times to offer sympathetic help. It is their earnest hope that student life at the Institute may be ever such as will reflect naught but credit on the name of Technology.

MAURICE R. SCHARFF, '09.

MEETINGS OF THE ALUMNI COUNCIL

President Maclaurin addresses the Council—Change in By-Laws—Committee on State Aid appointed

After an informal supper at the University Club, Boston, where forty were present, the fifth meeting of the Council was called to order by President Bemis April 28th.

The following members were present, with Messrs. George B. Glidden, '93, chairman of committee on musical affairs; Henry Howard, '89, chairman of committee on aeronautics; C. M. Spofford, '93, member of the income fund committee; and President Richard C. Maclaurin and Colonel Thomas L. Livermore, of the Executive Committee of the Corporation, as guests: *president*, A. F. Bemis, '93; *vice-president*, Franklin W. Hobbs, '89; *secretary-treasurer*, Walter Humphreys, '97; *executive committee*, Charles F. Park, '92, Walter E. Piper, '94, George W. Swett, '03.

Five latest living ex-presidents: Walter B. Snow, '82; Everett Morss, '85; Frank L. Locke, '86.

Representatives at large: C. R. Cross, '70; A. D. Little, '85; Charles T. Main, '76; J. P. Tolman, '68; Allan W. Rowe, '01; Eben S. Stevens, '68.

Class representatives: '68, Robert H. Richards; '73, F. H. Williams; '76, C. T. Main; '77, R. A. Hale; '79, E. C. Miller; '80, George H. Barton; '81, John Duff; '84, Harry W. Tyler; '85, I. W. Litchfield; '86, A. A. Noyes; '87, E. G. Thomas; '88, Arthur T. Bradlee; '89, Jasper Whiting; '90, William Z. Ripley; '91, Charles Garrison; '93, Frederic H. Fay; '94, S. C. Prescott; '95, Andrew D. Fuller; '98, C.-E. A. Winslow; '99, H. J. Skinner; '01, Robert L. Williams; '04, M. L. Emerson; '07, Lawrence Allen; '08, H. T. Gerrish; '09, Carl Gram.

Local societies and representatives: Technology Club of the Merimack Valley, John C. Chase, '74; Technology Club of New York, Francis C. Green, '95; North-western Association, M. I. T., I. W. Litchfield, '85; Washington Society of the M. I. T., I. W.

Litchfield, '85; Technology Club of Rhode Island, E. B. Homer, '85; Technology Club of Milwaukee, I. W. Litchfield, '85.

The records of the previous meeting were presented and approved, and the secretary reported the proceedings of the executive committee since the last meeting of the Council.

Announcement was made by the chairman of the committee on musical affairs that the Pop Concert was to be held, and the president announced that the executive committee had decided to hold a general spread before the concert.

Mr. Howard, chairman of the committee on aëronautics, presented a final report, which by vote was referred to the Executive Committee of the Corporation. The committee on aëronautics was held pending the action of the Executive Committee.

The chairman of the committee appointed to consider a Congress of Technology, Mr. A. D. Little, presented a report, and stated that a copy had already been presented to the Executive Committee of the Institute.

President Bemis announced the result of the changes in the constitution, and suggested that nominations be made for a new nominating committee. The following were elected:—

CHARLES T. MAIN, '76.	} To serve until the annual meeting in January, 1911.
A. L. MERRILL, '85.	
A. D. FULLER, '95.	
H. W. TYLER, '84.	} To serve until the annual meeting in January, 1912.
E. H. HUXLEY, '95.	
F. H. HUNTER, '02.	
W. B. SNOW, '82.	} To serve until the annual meeting in January, 1913.
F. H. FAY, '93.	
C.-E. A. WINSLOW, '98.	

The first group are those whose terms would have expired at the time of the last annual meeting; the second group were to have held office under the former constitution until January, 1911; and the third group were nominated by the former committee to hold office for two years. Thus the former administration is connected directly with the new nominating committee.

Mr. Morss, chairman of the income fund committee, made a report which was placed on file. It was suggested that a formal

and final report be prepared and printed in THE TECHNOLOGY REVIEW. In view of the fact that the last payment of the subscription is due this coming June, and that the alumni welcome any request that is made by the Corporation through its President or the Executive Committee, President Bemis introduced the guest of the Council, President Maclaurin.

Once more Dr. Maclaurin assured the Council how welcome reports and suggestions are to the Executive Committee of the Corporation from the Council, and he read from the report made in regard to the proposed Summer School for Surveying suggestions which showed that formal action on the part of the Executive Committee was apparently unnecessary as regards this report.

He stated that the report on the proposed Congress of Technology, which had just been received, would be given careful consideration, as would also the report just submitted by the chairman of the committee on aeronautics.

He acknowledged that the site problem is one of the greatest before the Executive Committee, and assured the Council that this committee is working earnestly toward a solution. He believes that the members of the Council would agree that it would be unwise and very unbusinesslike to make public the exact plans of the Executive Committee or to suggest what sites, if any, are being definitely considered. He also asked the Council to realize how foolish it would be for the Institute to sell its present property at a figure which would be a tremendous sacrifice as compared with a possible income which could be received from the sale of the land in a few years, when the rights of the abutters would grow less or could be bought at a more reasonable figure.

In the obtaining of a site, the money is the greatest factor, and that has to be raised. President Maclaurin very frankly told the Council of means that have been tried to obtain money, although so far unsuccessful. The site problem is one that will be solved. A greater problem, however, is the question of funds for the general expense and maintenance of the school, and funds for its development in special lines are necessary.

He believes that it would not be wise at this moment to start a campaign for the continuance of the Alumni Fund, the last payment of which is due this coming June. He believed that

the Council could assist in the raising of funds by interesting members of the coming legislature in the Institute and educating them in regard to the needs and the work at Technology. The last payment of the state aid is made this year, and either the continuance of the same amount or an increase of it is most necessary. Any careful influencing of the legislature by proper means will be of great assistance to the Institute.

Colonel Livermore, a member of the Executive Committee of the Corporation, addressed the Council and stated that he believed that the Institute endowment had been somewhat jeopardized by the prejudices that had been raised in the discussion of the merger of the Institute with Harvard, as the number of gifts since that time was somewhat less than formerly, but he is sanguine as to the fate of the Institute, and believes that the solution of the site problem is to be at a nearer date than was suggested by President Maclaurin. He also believes it unwise to ask the alumni to continue its subscription for any series of years at this moment, but that this is a question for the alumni themselves to decide.

Mr. Tolman spoke, and believed that it was not so much a question of what the state could do for us as it was what the alumni ought to do. He called the attention of the Council to the fact that each student in the past year cost the Institute \$158 more than was paid for him in tuition, and that each could realize that during the four years he would be indebted to the Institute at least \$600, and even suggested that each alumnus should pay this back, the amount and the date varying, of course, for the various alumni. Mr. Tolman favors a renewal of the subscription.

Messrs. Charles T. Main ('76), C.-E. A. Winslow ('98) and A. D. Fuller ('95) spoke on the problem.

Mr. E. G. Thomas ('87) addressed the Council on the question of term membership. He had corresponded with the term members, and asked them to answer several questions, suggesting what effect the term members had had on the policy of the Institute, was it really worth while to travel a great distance to attend the formal meetings, and were the policies of the Institute decided in the open meetings. The general tone of the replies suggested that the meetings were very formal, that they were not inspiring and that it was more than could be expected to have the distant term members come to attend these meetings. Some even sug-

gested that they knew no more of the policies and took no greater part than before they were term members. Mr. Thomas believes that this is a vital question concerning the Council, and, after reading selections from these replies, stated that he would be glad to hear from Dr. Maclaurin and Colonel Livermore.

President Maclaurin responded, and stated that he did not know whether he was to defend the Corporation or the term members. He assured the Council, however, that the term members, the life members and members of the Executive Committee were all considered legally and sentimentally alike at the meetings of the Corporation, and that any member or any term member was privileged to take the initiative in regard to any question of policy or whatever question he saw fit to raise at the meetings. He also stated that all the proceedings of the Executive Committee that could be reported were announced to the members of the Corporation. He stated that it hardly seemed that he should take the initiative in suggesting work for these term members.

Colonel Livermore, in replying, stated that the constitution of the Corporation could be changed, but, as it stood, the Executive Committee met and transacted a great deal of business. The constitution could be changed, even to requiring members of the Executive Committee to attend the meetings of the Faculty or all members of the Corporation to meet with the Faculty, but that seemed to be something for which members of the Executive Committee would feel that they were not prepared or that it was a task which they were not competent to undertake. It did seem that a change in the constitution would be a tremendous problem to discuss or undertake. He believed that the term members under the present by-laws could take an active part in the government of the school.

Mr. Bemis raised the point that but few of the Council had taken the initiative in its work, as active part seems to have been concentrated to these few, and he suggested that the others might be criticised for their lack of interest in the work of the Council, just as the Corporation term members have been.

The Council adjourned at 11.20 P.M.

WALTER HUMPHREYS,
Secretary-Treasurer.

SIXTH MEETING, JUNE 20

After the usual informal supper the Council was called to order by President Bemis, and there were present twenty-one members and one guest, as follows: *president*, A. F. Bemis, '93; *vice-president*, Franklin W. Hobbs, '89; *secretary-treasurer*, Walter Humphreys, '97; *executive committee*, William S. Johnson, '89, Charles F. Park, '92.

Representatives at large: C. R. Cross, '70; Charles T. Main, '76; George F. Swain, '77; Allan W. Rowe, '01.

Class representatives: '76, C. T. Main; '84, Harry W. Tyler; '86, A. A. Noyes; '94, S. C. Prescott; '95, Andrew D. Fuller; '96, J. Arnold Rockwell; '97, C. W. Bradlee; '99, H. J. Skinner; '01, Robert L. Williams; '05, G. DeW. Marcy.

Representatives of local societies: Technology Club of the Merrimack Valley, John C. Chase, '74; Technology Club of New York, Francis C. Green, '95; M. I. T. Club of Central New York, James P. Barnes, '05.

Guest: President Richard C. Maclaurin.

After the formal business of reading the records of the last meeting and of the executive committee meetings since the Council met, the president rehearsed the business of the evening.

An informal report was made for the committees on the spread and Pop Concert. It was announced that the deficit on the spread was about eleven dollars and the excess of the receipts over the expenses of the Pop Concert was about one hundred fifteen dollars.

A communication was received from the Corporation stating that a change in its by-laws had been made in regard to the election of alumni term members. A committee of the Council—Messrs. Bemis and Humphreys—is authorized to outline the necessary changes in the alumni by-laws and to have these published in the July number of the REVIEW, in order that the Council may act upon them at its next meeting. This change on the part of the Corporation invites the Alumni Association to present only as many nominations for term membership as there are vacancies to fill, instead of presenting two more than the number of vacancies. It was the sense of the Council that the nominating committee of the Alumni Association instead of presenting eight candidates should nominate six, of whom three

shall be chosen by the alumni as nominees for term membership. The Corporation by its new by-laws requires the Alumni Association to send to its nominating committee nominations for each vacancy on the Corporation at least thirty days before its annual meeting in order that these names may be circulated to all members some time before its annual meeting.

By ballot and after an informal suggestion made by the executive committee Professor Robert H. Richards, '68, James P. Munroe, '82, and Francis C. Green, '95, were elected to serve for three, two and one years, respectively, as members of the committee on permanent funds.

A communication from President Maclaurin was read, stating that the Executive Committee of the Corporation unanimously approves the report made by the Committee on a Congress of Technology. The Executive Committee believes that it might be held in connection with the fiftieth anniversary of the granting of the Institute charter, which would be in the early part of 1911. The committee desires the Alumni Council to name a committee to represent the Alumni Association in making preparations for such a congress. By vote of the Council the president of the Association is authorized to appoint such a committee.

A further communication stated that the report of the committee on aeronautics had been received, but that before definite steps could be taken to follow the suggestions of the Council expert advice is to be obtained by the President of the Institute. The Executive Committee is of the opinion that now is the time to establish work in aeronautics, and also believes heartily in the suggestion that the work be of the character of graduate research rather than a regular undergraduate course. Information has been sought from foreign universities where already some investigations in aeronautics have been made.

A request was received from the President that the Alumni Association should appoint a committee to assist in the Institute's proposed application for state aid. The present aid, voted by the legislature ten years ago, ends with the payment to be made this year. The Executive Committee of the Corporation authorized the President to appoint four to be associated with him as a committee of the Corporation, and Dr. Maclaurin asks the Alumni Council to appoint a similar committee. The

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Council voted that the president of the Alumni Association appoint such a committee, of which he shall be a member.

The Council adjourned at 9.30 P.M., after which an informal discussion took place in regard to appropriate procedure on the part of the committee appointed to consider an appeal for state aid for the Institute.

WALTER HUMPHREYS, *Secretary-Treasurer.*

PROPOSED CHANGE IN BY-LAWS

Proposed changes in the by-laws in accordance with the communication from the Corporation presented to the Council at its sixth meeting, June 20, 1910:—

The first article of the by-laws is printed below with the changes inserted in the appropriate places, but printed in bold-faced type. The section replaced is printed at the end.

ARTICLE I

ELECTIONS

SECTION 1. Prior to October 10 the Nominating Committee shall transmit to the Secretary nominations for the offices to be filled and nominations for term members of the Corporation of the Institute. The nominations for election to the Corporation shall be at least **double the number of** [it was: five more in number than the] places to be filled. The Secretary shall publish the nominations transmitted by the Nominating Committee in at least one daily paper in the city of Boston before October 15. Additional nominations for any office or for election to the Corporation, signed by at least thirty members of the Association entitled to vote for such nominees, shall be placed on the official ballot by the Secretary if received by him before November 5.

SECT. 2. Prior to November 20, letter ballots containing the names of all candidates shall be sent by the Secretary to all members of the Association entitled to vote for such candidates. In order to be counted, a ballot must be returned to the Secretary, enclosed in an envelope indorsed with the voter's signature and class. The polls shall close December 20, and the Executive Committee shall thereupon canvass all ballots and announce the result. The candidates receiving the largest number of votes shall be deemed elected. Should there be a failure to elect on account of a tie, the tie shall be resolved by lot drawn by the Secretary.

SECT. 3. At least thirty days before the March meeting of the Corporation, the Secretary shall send to the Nominating Committee of the Corporation the names of the candidates receiving the largest number of votes for election to the Corporation, in number **the same as** [it was: two more than] the number of **places to be filled** [it was: vacancies].

SECT. 4. If any vacancy occurs among the term members of the Corporation through death, resignation or otherwise, the Alumni Association shall choose for each vacancy **a candidate according to the provisions of Section 2 of this Article** [it was: two candidates in addition to those chosen according to the provisions of Section 2 of this Article].

SECT. 5. **Only members of the Alumni Association whose class has been graduated at least five years shall be entitled to vote for term members of the Corporation.**

SECT. 6. Nominations for representatives to the Council shall be made by the organizations which they represent, but the Executive Committee shall have charge of all balloting for election thereof.

SECT. 7. For the first year of the Council the ten members at large shall be elected five for a term of one year and five for a term of two years, and the representatives of classes whose years end in 1 or 6, 2 or 7, 3 or 8, 4 or 9, and 5 or 0, shall be elected respectively for one, two, three, four, and five years. The provisions in Sections 1, 2, and 3 of this Article shall not apply in the case of nomination and election of these members and of the first set of representatives of alumni organizations, but all matters relating thereto shall be in the hands of the Executive Committee.

Committees already elected by this Association shall continue for the terms for which they were chosen or until their successors are chosen by the Council.

This section shall become void when its provisions have been carried out.

Here follows the section that it is proposed to change:—

SECT. 5. Only members of the Alumni Association who have not been connected with the Institute as students for at least five years shall be entitled to vote for term members of the Corporation.

THE INCOME FUND

Report of the Fund Committee, Dec. 31, 1909—What the Fund has meant to the Institute

The following report of the Income Fund Committee was read at a meeting of the Alumni Council held April 28, 1910:—

RECEIPTS

Subscriptions, 1906	\$61,921.41	
Subscriptions, 1907	41,286.44	
Subscriptions, 1908	42,500.51	
Subscriptions, 1909	44,952.19	\$190,660.55
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Special gifts	\$1,124.50	
Interest, 1906	712.91	
Interest, 1907	653.60	
Interest, 1908	400.79	
Interest, 1909	256.29	3,148.09
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		\$193,808.64

EXPENDITURES

Transferred to M. I. T., 1906	\$51,229.11	
Transferred to M. I. T., 1907	37,942.54	
Transferred to M. I. T., 1908	35,701.41	
Transferred to M. I. T., 1909	41,147.94	\$166,021.00
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Expenses, 1906	\$5,913.36	
Expenses, 1907	111.14	
Expenses, 1908	260.58	
Expenses, 1909	102.43	6,387.51
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Cash balance		21,400.13
		<hr/>
		\$193,808.64

The Fund Committee has also received and transferred to the Institute twenty shares of Beacon Hill Trust stock, par value \$100 each.

"There has been an increase in expenses and a decrease in receipts from students' fees, and the net result, comparing current expenditures with current receipts, is a deficit of \$3,896.21. In this account is taken of one of the most interesting features of the year, namely, the results of the devoted and efficient work of the Income Fund Committee. This Committee has paid over to the Institute during the year \$42,583.61 free from all conditions. The collection of this sum shows the good will of the alumni, as well as the good work of the Committee."—*From Treasurer's Report for Year ending Sept. 29, 1906.*

"It is proper to make special reference to the great assistance furnished by the Income Fund Committee. Had the whole of the money contributed from this source been used for this year's expenses, this report would have shown a surplus of several thousand dollars instead of a deficit in the current expense account, but it has been felt that the wishes of the alumni would best be carried out by devoting their gifts, so far as possible, to special matters of development rather than to mere maintenance. Accordingly, besides paying during the past year for special apparatus for the Mechanical Engineering Department and for the Electrical Engineering Department, and besides salary payments to strengthen the instructing staff, there has been reserved the sum of \$10,000 to be applied during the coming year to certain special purposes, such as the purchase of a steam turbine and the extension of the plan of personal conferences between first-year students and the instructors, in which matters various alumni expressed a special interest."—*From Treasurer's Report for Year ending Sept. 30, 1907.*

"The contribution of funds for the current expenses of the Institute received through the Alumni Income Fund Committee continue to be of great assistance to the Institute. As was the case last year, not all of the money contributed from this source has been used for current expenses, but a substantial portion has been applied to permanent equipment. The construction of the new Technology Union has been made possible by an appropriation from these funds, supplemented by generous donations from graduates and friends of the Institute. From the amount

carried forward from last year's receipts from the Income Fund Committee and the amount since contributed a total sum of \$41,809 has been appropriated by the Executive Committee during the past year for the following purposes:—

For one-half the cost of erecting and equipping the new Technology Union	\$8,500.00
For installing new boilers and improving the heating and power plant	9,750.00
For fittings and installation of the new steam turbine	2,690.00
For steel testing machine for Mechanical Engineering Laboratory	500.00
For equipment of the extension of the laboratory of analytical chemistry	650.00
For maintenance and improvement of athletic field	1,600.00
For providing for personal conferences between first-year students and instructors	1,600.00
For increase of salaries of the instructing staff	16,600.00
Total	<hr/> \$41,890.00"

—From Treasurer's Report for Year ending Sept. 30, 1908.

"The contributions of funds for current expenses of the Institute received through the Alumni Income Fund Committee continue to be of great assistance. A substantial portion of these funds has been applied to permanent equipment. This amount, together with other outlays and special repairs, is sufficient to account for all of these contributions during the past year (\$41,147.94), as follows:—

Additions to Technology Union (in excess of direct gifts)	\$7,786.94
Salary increases	10,269.00
Electric light in mechanical laboratories	2,200.00
Changes in gymnasium	1,300.00
Additional mining machinery	325.00
	<hr/> \$21,880.94
Other outlays and special repairs	19,267.00
	<hr/> \$41,147.94"

—From Treasurer's Report for Year ending Sept. 30, 1909.

COMMENCEMENT AT THE INSTITUTE

Next to the largest Class the Institute ever Graduated—
Twenty-two Advanced Degrees Given

Notwithstanding the rain on Monday, June 6, a large audience assembled in Huntington Hall to attend the Class Day exercises. The officers of the class were: R. F. Goodwin, president, who introduced the orators of the day; Frank F. Bell, first marshal, who delivered the marshal's address; Dudley Clapp, the class prophet; William McN. Schofield, presentation orator; James S. Snedden, class historian; and Bergen Reynolds, class statistician. The class prophet varied the usual exercises by introducing a slot machine, from which he produced the fortunes of the various members of the class as the coins were dropped into it. Mr. Reynolds presented the Institute in behalf of the class with a Thomas reflectoscope, with a complete set of projection attachments, which will be placed in the Tech Union permanently and will lend much to the entertainments to be given there. The machine not only projects lantern slides, but also opaque objects.

The spread which followed the exercises was given in the general library of Rogers on account of the rain. In the evening the senior dance was given at the Somerset. The graduating exercises were held in Huntington Hall, June 7. Two hundred and seventy-four received their diplomas and representative theses from each of the courses were read by the best student in each course. The Pop Concert was held in the evening at Symphony Hall.

In addressing the graduates, Dr. Maclaurin said:—

Among the educational principles that have tended to give individuality and distinction to this Institute has been the constant insistence on the importance of method in learning and in working. Even if time permitted, this would not be the occasion to expound the doctrine of method that has been elaborated here, but one element in that doctrine is so important that it cannot well be passed over. I refer to the prin-

principle that encourages men to do things for themselves,—the “do-it-yourself method,” as it is sometimes styled.

It is recognized clearly that men who are to be really effective must learn resourcefulness and self-reliance as speedily and as thoroughly as possible. They must not be spoon-fed with knowledge, but must learn to help themselves. And so, while here, they are constantly invited to try things for themselves. It is true, of course, that a great deal of knowledge could be reached by a shorter and smoother path,—as, *e.g.*, by direct instruction,—but the knowledge so acquired would be far less valuable. For one thing, it would be much less firmly grasped, and so would be more easily lost. And the learner would miss the invaluable discipline that comes from mastering things for one's self and the invaluable self-knowledge that is thereby acquired.

To know your limitation, what you cannot do well, is often as useful as a knowledge of your strength and power. Well, this “do-it-yourself method” characterizes the work here throughout the whole of a student's course. As a final example of it, each student is required to attack some problem under conditions such as prevail in the practice of his profession, and to write a thesis giving an account of his solution of the problem. The titles of all the theses are set out in the programme. It is a tradition here that a very brief synopsis of a few selected theses should be given at the graduation exercises, the selection being made so as to represent all or most of the courses at the Institute. I shall therefore call on those who have been chosen for this purpose to present a short account of their thesis work.

The following theses were read by the men representing the various courses:—

Course I. R. M. Gillis. “A Design for a Storage Reservoir on the Deerfield River.”

Course II. R. A. D. Preston. “Power Plant Test and Furnace Temperatures on the Oil-burning Steamer ‘Oklahoma.’”

Course III. W. B. Hargraves. “A Report on the Marsboro Gold Mine and Cyanide Treatment of a Silver Ore from Cobalt, Ontario.”

Course IV. W. S. Davis. “A Design of a Social Centre for the Centre of the City of Los Angeles.”

Course V. G. R. Lord. “An Investigation into the Effects of Iron-treated and Alum-treated Waters upon Distributing Pipes.”

Course VI. G. C. Humphrey. “Voltage Regulation of Alternators.”

Course VII. H. L. Lang. "A Quantitative Comparison of the Cellular Contents of Fresh Milk by Two Distinct Methods."

Course X. G. P. Lunt. "A Process for the Manufacture of Lactic Acid and Calcium Lactate."

Course XI. S. A. Malcom. "Design for a Sewage Disposal System at Manchester-by-the-Sea."

Course XIII. G. G. Holbrook. "Power Tests of a Steamer and its Model."

Course XIV. H. R. Lombard. "On the Equilibrium of the System consisting of Calcium Cyanide, Calcium Carbide, Carbon and Nitrogen."

Following the reading of the thesis subjects, Dr. Maclaurin congratulated the men for their work, especially those who had undertaken problems relating to construction work and building in the state of Massachusetts. He declared that it would be to such men that the state would owe her industrial and commercial supremacy. He advised the men always to remember, when they got out into the world, that they were Tech men, and that they should be willing to learn under conditions of the broad world just as much as at the Institute. In concluding his address, he said:—

In congratulating this graduating class on the successful completion of its course at the Institute, I congratulate its members particularly on the opportunities of social service that the practice of their profession will afford. You will, of course, as sensible men look to your individual interests, but I hope that you will not lose sight of the larger possibilities of your profession. You can scarcely fail, I think, to recognize your duty of service to the state. You owe much to society, which has made your education possible. See that you pay the debt by doing all that you are called upon to do in the spirit of thoroughness and sincerity that you have breathed while here. Yours is a noble profession, worthy of all social honor, and assured of such honor, provided only its members live up to the high standard that the dignity of their profession demands.

You are going out now to face the world under different conditions than what most of you have experienced before. I feel sure that your training here will stand you in good stead in your new circumstances. You will find, of course, that you have much to learn; but the spirit and the method that have made for success here will not fail you anywhere. You will remember that a high standard of honor and of professional capacity is expected of a Tech man, and that you must bestir yourselves to live up to the expectations of your friends. I know that you will

not forget your Alma Mater, for loyalty to the good old M. I. T. characterizes practically all who pass through this Institute. The great army of Tech alumni—now so many thousands strong—looks to you to hand on the noblest traditions, and is ready to welcome you and to help you generously in almost every quarter of the globe. Most heartily do I—in the name of the Corporation, the Faculty and the alumni—wish you all success.

Two hundred and fifty-two of the class then received the degree of Bachelor of Science at the hands of the President, while twenty-two others received advanced degrees given for at least five years' work. Of this number one hundred and thirty-five live in Massachusetts, two come from Canada, while the following countries each have one: China, Denmark, Norway, Ecuador, Cuba and Asiatic Turkey.

Prominent among the foreigners is Johannes Ahlers, of Trustrup, Denmark. He took a preparatory course at the Trustrup Realskole before coming to this country, which he did in 1902, coming to New York at the age of fifteen. He entered Kansas University in the middle of his freshman year three years ago, and left as a clear sophomore to enter the Institute as a special student, finishing the course in civil engineering in two years. While at Technology, his studies have not prevented his taking up other work, and he has held a position on the student newspaper, *The Tech*, and was president of the Technology Christian Association.

Eugen Olaf Christensen, of Christiania, Norway, is also a civil engineer, and on the election of officers for the Cosmopolitan Club was unanimously chosen for the berth of president. He prepared at the English High School. The other foreign students are Pelayo Chinchilla—Kirkpatrick of Valparaiso, Chile; Rafael Adolph Beckman, of Parral, Chihuahua, Mex.; Achilles Hadji-Savva, of Baffra, Asiatic Turkey; Manuel Adrian Navarro, of Quito, Ecuador; Rafael Joaquin Torralbas, of Havana, Cuba; Yuan Tze Tsai, of Wuchow, China.

NEWS FROM THE ASSOCIATIONS

Chicago working for the right kind of Students—Matters
are brisk in Pittsburg—Gaining strength in New York
—News from the Coast—Tech men in Northern Texas

THE TECHNOLOGY CLUB OF NEW YORK.—The most important recent event was the celebration on Tuesday evening, May 24, of our first anniversary in the new club-house. Frank C. Schmitz, chairman of the entertainment committee, supplied "A Bunch of Plantation Darkies specially imported for the occasion, a delightful mixture of good fellowship and music, flavored with smoke and refreshments." The program was sufficiently varied to please everybody, in fact, every one joined in singing the songs led by the irrepressible black boys with their banjos and guitars. "All Tech men everywhere" were invited, the rooms were crowded and a number of men, appreciating for the first time by experience the attractions of the club, applied for membership.

The publicity man read a letter of congratulation and good wishes from President Maclaurin (who a year ago gave us his encouragement and Godspeed at the house opening), and in behalf of the Board of Governors referred to the progress made during the year, and prophesied that three years hence, when our present lease expires, not only will all Tech men in New York be glad that they are members of the club and several thousand non-residents be participating in its advantages, but the club will find itself owning a valuable piece of property with a more commodious Tech-constructed building with additional attractions.

The May *Bulletin* (we now publish a monthly bulletin) was devoted to the anniversary. The leading item, under the heading "Auld Lang Syne," said:—

The Board of Governors invite all Tech men to join with us next Tuesday night in celebration of the successful completion of our first year in the new club-house. Congratulations are extended to all, and the thanks of the board, for the interest and support which has enabled

the club to blossom in Gramercy Park. With membership and dues doubled, with increasing facilities for ministering to club requirements, with an advancing standard of good fellowship and helpfulness, the board looks forward to a year of progress and prosperity whereby Tech men and Technology may profit.

Treasurer Abbott reported that, whereas in December, 1909, the floating indebtedness exceeded the accounts receivable, the accounts receivable in May exceeded floating indebtedness, the only difficulty being in securing payment in time to sustain the club's credit. Prompt payment of accounts is essential for capital, now lacking, but we are glad that, instead of there being a deficit the first year, as anticipated, when subscriptions of over \$3,000 were pledged, the club is gradually establishing itself by its own virtues.

Mr. Large, chairman of the membership committee, reported that, beginning with 250 members in May, 1910, 284 new members had been elected, 17 dropped, and only 29 had resigned, although dues had been doubled and that we had 87 non-resident members, and said:—

The non-residents should run up normally to 2,000. The chairman appreciates the assistance rendered the committee, and asks continued co-operation, that our club may be not only a flourishing social body, but a power among men in scientific callings and in the affairs of the Institute.

Mr. Cox, chairman of the house committee, reported:—

Rooms have rented readily and been regularly occupied, although just now a few are available. Transient guests have been frequent, and have spoken kindly of us. Non-residents may now always be accommodated, if not at the house, then near by. F. A. Colby is in charge of rooms, and Mr. Chamberlin in charge of restaurant. The last summer season showed that many members whose families are away will use the club, and the open-air dining pavilion will be very attractive. The number of men taking luncheon and dinner has steadily increased. The pool and billiard tables are popular, and the tournaments, including bridge, were closely contested. To fully enjoy this club, come here with your friends, and be comfortable and happy.

Mr. Floyd T. Taylor, chairman of the library committee, reports that he is slowly receiving from members books and pictures and desires loans and donations, and requests men to send us lists

of books for club use, and particularly scientific works, magazines, *Techniques*, year books, senior portfolios and photographs of dinners and classes. "Do it now," he says.

Mr. R. S. Allyn, class reunion committee, reported a continuance of class and society dinners,—'95, April 5, 15 men; '03, monthly dinners, about 12 men,—and that a stamp for dinner notices is at the club for use of any class, and a list of men with addresses both of members and non-members in or near New York.

Mr. Schmitz, of the entertainment committee, reports in addition to the anniversary celebration, two enjoyable smokers. One was on March 26, when Parker H. Kemble addressed us on "Development of the Motor Car from 1600 to 1886," illustrated by lantern slides, many of them made from rare prints. Mr. Kemble had made interesting research, and traced the development of motor cars from the days of sailing wagons to the modern car. At the other smoker, on April 29, John D. Moore gave us an original talk on "A Little Trip in Ireland," with lantern pictures which John D. expounded with his inimitable flow of humor, "infinite jest and merriment," leaving us the memory of many smiles and an affectionate regard for the Emerald Isle.

Beginning in July, the entertainment will comprise gatherings in the new open-air dining pavilion being constructed in the rear of the club-house by R. H. Howes, under the guidance of H. K. White, Noel Chamberlin, F. C. Hiron and J. Parker Fiske. The pavilion will nearly double our dining-room space. It is about 18 by 60 feet, and the summer nights will be a joy forever. An outing dinner in which sweethearts and wives may join is contemplated for August; and in September a special program smoker will bring together the members for the fall campaign, at which smoker 1910 men will be welcomed.

By the organization of a new committee on business opportunities, of which Francis C. Green is chairman, it is anticipated that many members may secure new positions or promotions, and, to this end, confidential information is solicited of applications of and requests for men.

In closing these items, the board desires to mention especially its pleasure in welcoming among the visitors to our club-house H. W. Tyler on April 14, Walter B. Snow on May 17, A. F. Knudsen, of Honolulu, in June, and the Tech seniors in Electrical Engineering visiting New York power-houses on April 12; and

to particularly and cordially invite all out-of-town Tech men to come soon and often, incidentally becoming non-resident members and inducing others to follow their good example.—*William H. King, Chairman Publicity Committee, 17 Gramercy Park, New York City.*

THE PITTSBURG TECHNOLOGY ASSOCIATION.—The Pittsburgh Association feels that an apology is due to the REVIEW for the neglect of its secretary to chronicle the doings in this section in the last issue. Even at this late date we will make all possible reparation by giving an outline of the events incident to our annual dinner.

Sixty-eight loyal sons of Technology welcomed Dr. Maclaurin and our alumni president, Mr. Bemis, at the University Club on March 2. Dr. Maclaurin, having visited us on a similar occasion, one year before, was no longer a stranger, and his formal introduction was quite eclipsed by the friendly greetings and warm hand-clasps earlier in the evening.

The dinner, as such, reflected much credit upon our worthy steward; and to those who are still unable to reconcile their pampered interiors with their intact bank accounts we must point with pride to our indulgent "Guarantors."

Dr. Maclaurin struck a sympathetic chord when he insisted upon the necessity of early action in regard to the new site proposition. We are eagerly awaiting the impending movement of which he would only intimate. "Brother" Bemis, who was visiting many of the alumni associations with Dr. Maclaurin, spoke most encouragingly of our advancement as a factor in framing the policy of and upbuilding the Institute. We are beginning to realize that we are not only interested in Tech, but that we are under obligations and have a distinctive duty to perform.

Professor Crabtree, of the Carnegie Technical Schools Faculty, gave us an unodious comparison between his parent and adopted "Techs"; and Mr. Knowles, Superintendent of the Bureau of Filtration, told us what we as engineers could do in public life for our cities.

As the result of a short business session, the following officers were elected for the current year; Sumner B. Ely ('92), president; H. D. Shute ('92), vice-president; L. K. Yoder ('95), W. I. Bickford ('10) and Fred Crabtree ('89), executive committee; Harry A. Rapelye ('08), representative to Alumni Council.

The evening (or early morning) concluded with vitagraph views of the last "All Technology Reunion," to the great amusement of every one.

Between March 2 and May 26 our time was employed in a campaign for membership in the Guarantors' Society. The neat sum on the proper side of our ledger proclaims the success of our efforts and the generosity of our members.

On May 26, the second meeting of the year, an informal smoker was also held at the University Club. Twenty-eight men were guests of the Guarantors' Society. Mr. George R. Wallace, of Princeton, entertained us with an unusually interesting explanation of the Commission Form of City Government (which is receiving favorable agitation in Pittsburg), and gained twenty-seven champions for the movement.

The secretary's report was read, and the treasurer's report showed a very flattering condition of finances.

The remainder of the evening was spent in consuming refreshments and the song book from cover to cover.

The association is now established on a solid basis, and will make efforts in the future to be of some material assistance to the Institute.—*Waldo Turner, '05, Secretary-Treasurer, Frick Building Annex, Pittsburg, Pa.*

TECHNOLOGY CLUB OF BUFFALO.—Those fortunate enough to attend the dinner given for Professor Richards on March 5 at the Buffalo Club reported it a very enjoyable affair. The reminiscences of Professor Richards and Mr. Patch were the most appreciated part of the occasion.

April 13, the club, nineteen strong, got together at the Genesee Hotel for a beefsteak dinner, with Alex. Rice McKim ('86), and his friend Louis Mark, the portrait painter, as guests. H. A. Boyd gave a talk on pipe-making.

The German Supper and Song Fest in the Rathskeller of the Buffalo Club on May 18 proved to be the event of the year. An indefatigable piano player kept the crowd so busy singing that all business and speech-making were put over until next fall.—*W. H. Watkins, Secretary.*

TECHNOLOGY CLUB OF PHILADELPHIA.—The bowling season was brought to a close on March 26 by a return match with the

team representing the M. I. T. Society of Washington. The Washingtonians were again the victors, but the match was closely contested. The visiting team consisted of B. W. Cary ('08), C. A. Farwell ('06), A. H. Howland ('05), C. M. Draper ('07) and G. R. Jones ('07); while the local club was represented by C. M. Emerson ('06), H. A. Terrell ('06), N. A. White ('06), E. W. Wiggin ('05) and J. McGowan ('08). The highest string, 219, was made by Terrell, and the highest three strings, 515, by Draper. The total pins were 2,150 and 2,144, and the average scores 143.3 and 142.9 for the Washington and Philadelphia teams respectively.

On April 2 an informal dinner and meeting was held at Hanscom's. Mr. Paul W. England ('91), conduit engineer of the Bell Telephone Company of Pa., presented a very interesting paper on "Underground Conduit."

The last dinner of the season was held at Hanscom's on May 14. Mr. Fred A. Maisch, photographer of the Philadelphia Museums, gave an illustrated talk on "Color Photography." A large collection of remarkably beautiful lantern slides, which had been taken in natural colors by means of the Lumière Autochromatic plate, was exhibited.

The Tech spirit of Philadelphia reached its maximum at the Third Annual Field Day at the Woodbury Country Club on May 28. The weather was ideal, the attendance was large and everybody contributed to make the day a most pleasant one.

The most important athletic events were a baseball game, relay race, and tug-of-war to which the class of 1906 had challenged the rest of the club; and they were well repaid for their temerity by being soundly beaten.

The baseball game followed in a general way the standard rules of the game; but, in addition, a number of extremely novel plays were introduced, which did not tend, however, to increase the score of 1906. Both teams were willing to quit at the end of six innings with the score 11-4 in favor of the "Yanigans." The teams were as follows: "Yanigans,"—Keisker ('97), Wiggin ('05), Trask ('99), Pierce ('99), Bean ('99), Pierce ('04), Remick ('09), Gallagher ('08), Whipple ('09); 1906,—White ('06), Walsh ('06), Emerson ('06), McGinnis ('06), Dean ('06), Chase ('c6), Tillson ('06), Burns ('05), McGowan ('08). Umpire, Walker ('05). (No wonder '06 lost.)

The tug-of-war was another '06 disaster, but the relay race was a "Yanigan" defeat. The relay teams were: 1906,—Emerson White, Walsh, Patterson, and McGinnis; "Yanigans,"—Wiggin ('05), Whipple ('09), Remick ('09), Gallagher ('08) and Keisker ('97). In addition to the above there were also potato and sack races and a tug-of-war between picked teams.

An excellent supper was served under the trees surrounding the club-house, and the evening was spent in singing Tech songs and dancing.—*Percy E. Tillson, Secretary, 223 So. 61st Street, Philadelphia.*

TECHNOLOGY CLUB OF ROCHESTER.—On Wednesday evening, March 23, a most enjoyable dinner was held at the Hotel Seneca by the Technology Club of Rochester. The following nineteen men were present: W. E. Hoyt ('68), F. W. Lovejoy ('94), A. S. Crocker ('97), O. K. Foote ('80), C. F. Wray ('96), J. H. Haste ('96), H. H. Tozier ('96), B. C. Hopeman ('00), L. F. Myers ('03), W. G. Bent ('05), A. F. Sulzer ('01), H. O. Stewart ('09), M. Lyman ('91), W. S. Lucey ('07), M. H. Eisenhart ('07), C. C. Spiehler ('09), C. C. Culver ('96), F. A. Cole ('91) and J. F. Ancona ('03).

Dinner was served at seven, the room and table being decorated with Technology flags and colors. After the main courses had been satisfactorily disposed of, a short business meeting was served up with the dessert and coffee. A statement of the finances incident to the Musical Clubs' concert was passed around, and a list of new members read by the secretary. The membership was placed at thirty-five, but at present has been swelled to thirty-six.

Immediately following the dinner our president, Mr. William E. Hoyt, of the class of '68, read a most interesting paper on the "Early Days of the Institute." Owing to the interest usually evolved by any reference to Technology in the days of President Rogers, it seems pertinent to quote extracts from Mr. Hoyt's paper.

EXTRACTS FROM MR. HOYT'S TALK.

I am asked to tell you something of the early days of the Institute.

It is a long journey, measured in years, back to the time of my own connection with the school.

I recall, not very clearly now, a September morning in 1866 when I found myself duly installed as a student, soon after the first new building on the Back Bay had been dedicated.

We were a mere handful of students then, and the recitation-rooms seemed big and empty as we went by the doors,—always standing open, even during lectures and recitations.

I wish I could show you now a picture of the Institute just as it was then, and of the surroundings. The massive Rogers Building stood out, sharply defined, against the sky, for there was nothing beyond it to the south save a broad expanse of water from Columbus Avenue on the east to Beacon Street on the west. The embankment for Clarendon Street had been made, and out beyond there was no land to be seen, between that and the highlands of Brookline in the distance, save a slender line of roughly built little railroad over which a tiny locomotive ran slowly backward and forward, dragging strings of miniature gravel cars behind. The puffing of this little engine and the grinding of the car wheels on the gravel-strewn rails broke the dead silence of that desert region which the Back Bay Corporation was creating by making land out of water, so that Boston might grow and expand into a city of befitting size.

Even now at times I fancy I can hear that engine just as we did when the sound came in through the open windows of the lecture-rooms during the early fall and the spring. Opposite the Institute, on Boylston Street, there were almost no buildings then, and in the vacant lots we were accustomed to play baseball.

Eben Stevens or Ernest Bowditch was our short stop and Bob Richards our pitcher; but I regret to say that we were never able to muster for any game more than five men, all told, and these were obliged to do double duty by playing—a portion of them—alternately on each side, with quick shifts. There were never more than two basemen then, one on first and the other on second base; and one forlorn fielder covered right field, centre field, and left field.

As for football, the Institute boys never got to it in my time. Two and one-half men on a side seemed rather inadequate for mass plays. With such numbers the game was altogether too open, even for those days; and so, after a few uneventful contests, we gave up the attempt, and settled down to fragmentary baseball and “one old cat.”

The *pièce de résistance* of our athletics, however, was military drill. Every Saturday, at eleven o'clock, we gathered the entire student body in an old, dirty, ill-ventilated hall on the corner of Washington Street and Boylston Street, to perform marvellous military evolutions under a hired drill-master, whom we cordially detested;—at least, I did; and how I hated that miserable drill! There was a sad lack of team work in our

performances, and, I regret to say, no enthusiasm. The whole thing was drudgery. Clouds of dust rose as we marched drearily from one end of the hall to the other and then back again, while the forlorn drill-master was trying to think of some new evolutions to put us through, and we were nearly suffocated in the heavy atmosphere.

If I remember rightly, we were taken out once for drill on the Common, but the small boys who witnessed the performance there "booed" us and expressed their derision so strongly that the experiment was never repeated.

After a few months of this sort of thing, I determined to abandon my aspirations to be a soldier. The Faculty readily excused me when I told them of a troublesome throat irritation caused by dust and bad ventilation in that ramshackle drill-hall, and at last I was free of it all.

But here a complication arose. The astute drill-master found that there would be a serious depletion of his forces if he lost one private from the ranks. He could not go through with some of the fine evolutions if such a large proportion of his regiment was taken from him, and so he made overtures for a compromise. He wanted me to stay, so that he might work his tricks in marching and deploying and have enough men to show an imposing array of six or seven in each company of the two or three companies in his regiment. He said, if I should leave, it would just spoil the entire combination, and so he offered to make me a corporal—a real live corporal—if I would only stand by him and not break up the regiment.

This offer did not appeal to me, and I refused to reconsider my determination, whereupon the great master of military tactics made one more final effort to preserve his forces from dissolution. "Just stay with me," he said, "and I will do anything. I will make you sergeant. Think of that! a sergeant, with stripes on your arm! Of course it will interfere somewhat with the proper proportion of officers to privates, for, if we promote you, we shall have very few privates left; but I am willing to do it, nevertheless, for your sake and for the regiment." But these entreaties were all in vain. I told him I did not really care for high military honors, and that I had resolved to worry along without them, for a time at least.

Next there comes to my mind Professor Osborne, who taught us spherical trigonometry and kindred subjects. He was the cleverest demonstrator in the lecture-room I ever listened to. Every word he uttered was right to the point, and with his explanations all difficult things became simple. He chose his text-books with great care, and had few of them. If we came to him with a problem after his lecture, he seemed to take it as a favor, and he was pleased to show us how to work out hard things in mathematics.

Then there was our French teacher, Ferdinand Bôcher, who taught us German also, a great, good-natured man overflowing with kindness. He had excellent taste in selecting reading matter for his classes, and he contrived to fill us all with enthusiasm over our work. If I remember rightly, he taught in those days at Harvard also, giving the Institute only a portion of his time. Then on certain days Professor Bôcher had French readings down town in Boston, to which the Institute students were invited, and it was a rare privilege to attend these very fashionable gatherings of Boston's Four Hundred.

William P. Atkinson was our professor of English, and we profited by his instructions. He was a kindly man, and did in his measure good work which was helpful and sane.

Of the instructions in architecture I knew but little, save that the department was in competent hands. Professor William R. Ware was a man of high artistic attainments, and the many beautiful buildings which he designed in and about Boston were monuments of his skill. He had the love and respect of all his pupils.

Of Professor Rogers I wish I might be able to tell you much, but I can speak of him only in the most general way.

He was a man of commanding presence and of striking personality, genial always, but with dignity in his manner.

It was a delight to hear his lectures. He had a wonderful clearness of expression combined with grace of utterance, and the attention of his listeners was fixed by his opening words, and held throughout his discourse to the very end. Even now, after more than forty years have gone by, I can recall the very words he used in some of his talks to us.

But these pleasant experiences were of short duration, for at the beginning of our senior year Professor Rogers' health failed rapidly, and he was obliged to give up teaching.

He seemed to me a man of indomitable will and of tremendous enthusiasm, who gave inspiration to all about him.

His ideas of education differed widely from those of many others, and he wanted the Institute to be founded on a new plan and to be conducted in a new spirit different from that of most existing institutions of that grade. He pleaded for pliancy rather than rigidity in the modelling of the courses and the conduct of studies. He wished to have a division of courses, if required in some cases, rather than a continuous curriculum, so as to help the development of special talent as well as the general capacity of the pupils.

It was this plan, gentlemen, and the spirit that Professor Rogers infused into the work of his faculty in the foundation and the beginning that have made the Institute what it is today.

Following this, a number of slides of the late reunion were thrown on a screen, and appreciated particularly by those who, through force of circumstances, were unable to attend the same.

A piano having been provided, the remainder of the evening was devoted to songs, Mr. C. C. Culver filling, in all senses of the word, the seat of honor at the piano.

Credit is due Mr. F. A. Cole for the dinner arrangements, which were most acceptable.

The club expects to meet the Course X. men, due in Rochester on June 14 to 16, and will endeavor to divert their attention from chemical matters for an hour or so at least.—*J. F. Ancona, Secretary, 190 Birr Street, Rochester.*

THE TECHNOLOGY CLUB OF HARTFORD.—The Technology Club of Hartford held its annual meeting and banquet at the Hartford Club April 15. The officers were elected for the ensuing year as follows: president, Karl E. Peiler; vice-president, Ernest W. Pelton; secretary and treasurer, George W. Baker; board of governors, Karl E. Peiler, Ernest W. Pelton, George W. Baker, D. S. Clark, R. J. Ross.

After the banquet the club adjourned to the library, and were entertained by a stereopticon lecture given by William Lyman Underwood, president of the Boston Technology Club, on "A Canoeing Trip through the Woods of New Brunswick, with Flashlight Pictures of Wild Animals."

This lecture was a great treat to the club, as the pictures were taken by Mr. Underwood and beautifully colored by him. He showed some views of large bull moose, the pictures being taken by flashlight within fifteen feet of the moose. There were interesting pictures of deer, lynx, bear, partridges and birds.

One very amusing picture showed one of the party riding on the back of a moose in the middle of the lake, but the ride only lasted a few seconds, long enough to take the flashlight picture, and was done under a wager. This seems almost impossible, but, if the moose are approached on the windward side, the acetylene search-light prevents them from seeing the approaching canoe, and it is very easy to paddle quietly right up beside one of these animals.

Those present at the meeting were: William Lyman Underwood (guest), George W. Baker, H. H. Marshall, Charles R.

Nelson, D. A. Richardson, H. H. Burdick, Clarence E. Whitney, Edward Lorenz, H. P. Maxim, Charles P. Howard, Frank I. Davis, H. H. Smith, R. J. Ross, A. T. Marshall, B. S. Clark, Montague Flagg, Karl E. Peiler, Ernest W. Pelton, H. D. Strong, Edmund P. Marsh, Burton E. Geckler, George C. Lees, Frank W. Hutchings, Charles P. Waterman, Lawrence W. Case, W. D. Milne, D. Parsons Goodrich and H. H. Ensworth

TECHNOLOGY ASSOCIATION OF NORTHERN CALIFORNIA.—The history of the association for the last six months has been very interesting.

Every month we have held an informal dance, and have averaged about seventeen couples. Everything was as informal as possible and, I am very sure, every one had an exceedingly good time. A series of dances are to be made a fixture each year, possibly substituting a card party for a dance. It has brought the men of the association into closer and firmer touch with each other, besides materially strengthening the association.

Besides, we have had one informal dinner, well attended, at which Mr. Herman Schussler, chief engineer of the Spring Valley Water Company, gave us an exceedingly interesting talk, and we hope to have the pleasure of hearing him again this coming fall.

The last meeting was the annual dinner, held the first Saturday in May at the Palace Hotel, San Francisco. At this dinner Mr. Burton G. Philbrick, '02, was elected president. Mr. Austin Sperry ('94), Mr. Leon H. Smith ('04) and Mr. Sidney T. Carr ('06) were elected members of the executive committee. The present secretary still has two years to serve.

This dinner was a very delightful one, and many fine talks were given. The body was very enthusiastic, and all are looking forward to a prosperous year for the association.

The plans for the coming year are as yet not definitely formed, but will include the annual tramp in June through Mill Valley, a fishing trip, a bowling party, the senior annual dinner in November, the social dances and card parties, one or two informal dinners and the annual dinner in May.

I will try to keep you better acquainted with us hereafter. For the last two years my work has caused almost continual moving around, but now, I believe, I am permanently located for some time at the address below, and I will be better able to keep in touch with you.—*H. C. Blake, Secretary-Treasurer.*

TECHNOLOGY CLUB OF SOUTHERN CALIFORNIA.—Professor George Ellery Hale, of the Mount Wilson Solar Observatory, had as his guests yesterday twenty-five graduates of the Massachusetts Institute of Technology, who are on their annual outing in Southern California. Yesterday afternoon the graduates were shown through the laboratory at the Santa Barbara Street station, and the mechanism of the various instruments was explained by the host. A banquet was given the visitors last evening at the Hotel Maryland, and Professor Hale delivered an illustrated lecture on the work of the Carnegie Observatory.—*Los Angeles Herald*, June 5.

NORTH-WESTERN ASSOCIATION OF THE M. I. T.—July 15 has been selected as the date of the annual outing of the association, and the entertainment committee has arranged a program for young and old, rich and poor, vigorous and decrepit. The event will be pulled off at the South Shore Country Club, which will be entirely given over to Technology for that day.

The association is planning a campaign of publicity for the Institute, which, we believe, will result in calling Technology to the attention of desirable young men who are about to choose their Alma Mater.

We have bought a number of copies of the 1911 *Technique*, which will be sent to preparatory schools in and around Chicago. This matter will not be allowed to lag, and Chicago will be better represented in the catalogue than it is at present.

Among the things which we hope to inaugurate this fall is a North-western Association publication of a lively sort, that will keep the men in close touch with each other as well as the Institute.—*Meyer J. Sturm, Secretary*, 84 La Salle St., Chicago.

TECHNOLOGY MEN IN NORTHERN TEXAS.—The readers of the REVIEW will, no doubt, be pleased to know of the efforts that are being made by the alumni and past students of Technology in Dallas and Fort Worth toward a future organization of alumni in northern Texas.

The first informal dinner of Technology men of this part of the country was held in Dallas June 3, ten men being present. During the evening it was proposed to form a permanent alumni

organization, which met with universal approval. A temporary secretary was elected, and an active canvass will be made to get in touch with all former students in this part of the state. We have some loyal and enthusiastic Technology men here, and we shall get together occasionally to become better acquainted and talk over the interests of Technology. We hope to have soon large enough attendance to form a recognized alumni association, and believe that this will be only the beginning of a state organization.—*Alexander C. Sloss, Jr., '08.*

Brookline Alumni found Scholarship

The Brookline alumni of the Institute have organized an association, electing Gorham Dana as president, George Lawrence Smith as secretary and an executive committee consisting of Charles M. Baker, Walter Humphreys, Arthur D. Little, William T. Sedgwick and Joseph Foster White. They have decided to establish a scholarship at the Institute which will give \$250 a year to some ambitious young man in Brookline who would otherwise not be able to pursue his course there.

Technology Well Described

The *New England Magazine* for June contains an excellent article of ten pages on the Institute, fully illustrated. The history of the institution is dealt with briefly, but much is said of the character of the Institute training. The article also gives a good idea of the conditions of student social life and of the value of athletics as practised here. It is an article that every alumnus should have, and can be secured by sending fifteen cents to the New England Magazine Company, Boston, Mass.

INSTITUTE NOTES

Faculty Promotions—Some of the Activities of the Instructing Staff—Two New Scholarships.—Bequest for Geophysical Research

President Maclaurin delivered the principal address to the graduates of the Abbott Academy at Andover, June 13, and was the chief Commencement speaker at the fortieth commencement of the New Hampshire State College of Agriculture and Mechanic Arts.

The following faculty promotions have been made by the Executive Committee and confirmed by the Corporation: Associate Professor C. L. Norton to be Professor of Heat Measurements, Assistant Professor C. B. Breed to be Associate Professor of Civil Engineering, Assistant Professor W. J. Drisko to be Associate Professor of Physics, Assistant Professor G. B. Haven to be Associate Professor of Mechanical Engineering, Assistant Professor F. J. Moore to be Associate Professor of Organic Chemistry; W. C. Bray, Research Associate, to be Assistant Professor of Physico-Chemical Research; Dr. D. F. Comstock, Instructor, to be Assistant Professor of Theoretical Physics; Dr. E. B. Spear, Instructor, to be Assistant Professor of Inorganic Chemistry; Mr. T. H. Taft, Instructor, to be Assistant Professor of Mechanical Engineering; Mr. R. S. Ayres, an assistant, to be Instructor in Physics; and Mr. D. Carb, an assistant, to be Instructor in English.

At the annual meeting of the American Institute of Electric Engineers Professor Dugald C. Jackson, head of the Department of Electrical Engineering, was made president. Percy H. Thomas, '93, of New York, was elected one of the vice-presidents.

At the annual election of officers of the Electro-Chemical Society, Pittsburg, in May, Professor William H. Walker, head of the Research Laboratory of Applied Chemistry, was elected

president. S. S. Sadtler, '95, of Philadelphia, was elected one of the vice-presidents, and W. R. Whitney, '90, director of the research laboratory of the General Electric Company of Schenectady, was made one of the managers.

Announcement has been made that Technology has joined with Yale, Harvard and Columbia in exempting from regular tuition advanced students from Scandinavian universities, not exceeding three students in any year, who may be nominated by their respective universities and recommended by the American Scandinavian Society.

Professor Désiré Despradelle, of the Architectural Department, has been elected corresponding member of the Académie des Beaux-Arts in the place of Whitney Warren. Professor Despradelle is one of the leading architects of America. In the Paris Salon of 1900 he was awarded first medal for a design of a monument dedicated to "the glory of the American nation," and entitled "The Beacon of Progress." He has received many other honors at Paris and Rome, and in the former city, as assistant inspector of buildings and national palaces, helped in the building of many public and private edifices.

During the spring a course of lectures was given before the Department of Naval Engineering by Sidney W. Barnaby, of Southampton, England, the chief naval architect and technical director for Thornycroft & Co. Mr. Barnaby is a member of the Council of the Institution of Naval Architects and the Institute of Civil Engineering, and is the possessor of the "James Watt" and "George Stephenson" medals. Mr. Barnaby made the prediction that oil will supersede coal as fuel for steamships.

The United States government placed the revenue cutter "Gresham" at the disposal of the Naval Engineering Department for the purpose of making progressive speed trials over the measured mile course of Provincetown, Mass.

Mrs. Frances Irving Weston leaves by will \$10,000 to the Institute to provide two scholarships, one of which shall preferably go to a boy from the Roxbury District. This is to be known as the Samuel Martin Weston Scholarship. The other scholarship is to be known as the Frances Irving Weston Scholarship, and is to be used to aid an American Protestant girl of Massachusetts.

At the commencement of the Baltimore Polytechnic Institute last month Dr. Harry C. Jones, of Johns Hopkins University, who made the commencement address, made the following statement: "The growth of research in America has exceeded the growth of American universities, to which the founding of such institutions as the Carnegie Institute in Washington and the Rockefeller Institute of New York for medical research is due. I consider the Massachusetts Institute of Technology to be the best technical school in the United States or on the Continent."

New Orleans papers, May 24, report the arrival from Boston of Professor Thomas A. Jaggar, Jr., of the Department of Geology, and Professor C. M. Spofford, of the Department of Civil Engineering, who are on their way to Costa Rica, where Professor Jaggar will make a scientific study of the recent seismic disturbances in that country, while Professor Spofford will investigate the physical condition of the earth and of the buildings with the view of finding out the best type of buildings to erect in earthquake countries. This is probably the first scientific investigation of this kind that has been undertaken.

A party of fourteen students from the chemical and mechanical engineering courses, accompanied by Professors Talbot and Thorpe, made a fifteen-day trip, visiting industrial plants and studying chemical and engineering processes, about the middle of June. They made stops at North Adams, Mass., Glens Falls, Ballston, Mechanicsville, Niagara Falls, Buffalo, Rochester and Syracuse. At Rochester members of the Technology Club took the party in automobiles to Canandaigua, and gave them a banquet.

It has been decided to change the name of the Department of Naval Architecture to that of Naval Architecture and Marine Engineering. The head of the department will have the title of Professor of Naval Design and Construction.

Professor Robert H. Richards left June 10 on a summer school with his mining students. He was accompanied by Professor Bugbee and Instructor Hayward, both of the Mining Department. The party will go to Buffalo, and from there take an ore steamer to Duluth, where they will see the monster ore docks. They expect to visit the Michigan copper region at Keweenaw Point, the nickel mines at Sudbury, Ontario, and, finally, the silver mines at Cobalt, Ontario.

At the Commencement Exercises of Harvard University, June 28, the degree of LL.D. was awarded to Dr. Richard Cockburn Maclaurin, a scholar "distinguished in three continents for his knowledge of the laws of nature and of man, whom we honor for his own talents and as president of our most celebrated school for engineers."

By the will of the late Edward Whitney, of Belmont, the sum of \$25,000 is given to the Institute to provide for research work in the science of geophysics. The fund is to be known as the Whitney Fund, and the work done must be in the line of protecting life against the disasters of earthquake.

Anniversary Celebrations

The classes celebrating this year were '85, '90 and '95. The class of '85 took possession of Dr. Schubmehl's boys' camp at Little Asquam Lake, N.H., where they celebrated their twenty-fifth anniversary June 16, 17, 18 and 19.

The class of '90 celebrated its twentieth anniversary at the Vesper Country Club June 6 and 7. The days were spent in playing golf and other similar activities, and on the evening of June 7 Colonel Hayden, president of the class, gave a banquet at the Algonquin Club.

The class of '95 occupied Dr. Schubmehl's camp at Sherwood Forest, Little Asquam Lake, N.H., June 4, 5, 6 and 7. Although there was considerable rain, the class had a most delightful time.

Meetings of the Council

The present administration of the Alumni Association has planned to hold meetings of the Council on the first Monday in October, November and January. The last, that on January 2, will be the annual meeting, when reports will be due and such appointments as are called for in the constitution will be made.

AMONG THE UNDERGRADUATES

A brief Résumé of the Advances of the Past Year—
Student Activities on a Good Basis

By far the most important enterprise that the students have undertaken is the perfecting of the organization of the Institute Committee and putting it on a substantial business basis as described by Mr. Scharff in an article in this number of the REVIEW.

The Tech Show, "The Queen of the Cannibal Isles," was very successfully presented in Boston, Northampton, and Malden. The net proceeds of the performances amounted to \$1,200, but the profits were reduced by the amount of a bill for \$450 left by last year's show management. This money was turned over to the Institute Committee without recommendations, and is a precedent which probably will be followed by various Institute activities which have a surplus after paying expenses.

The *Evening Transcript* said of the Show:—

The songs were especially enjoyed, and when the monster elephant, some thirty feet long, came in for one of the choruses, there came repeated encores. The college boys made dashing "girls" in personal appearance, the chief hits in this line being Munroe Rhodes Pevear as the queen and Charles Phillips Kerr as the girl from Pittsburg. Sidney Arnold Malcolm was a cannibal girl, and was repeatedly recalled for the clever verses in his topical song, "Quit yer Kidding." William McNair Schofield was energetic and entertaining as Bluffem Jones, and Harold Snell Birchard and John Soley Selfridge, although they did not come into the play until late, were extremely good. The chorus was a large one, and would have done credit to a professional production in good looks and voice.

Although the crew had hardly three weeks' practice before it had its first race with the Union Boat Club, it developed some remarkable material, and is bound to make a good showing next year, as all the men of the first boat will return to the Institute. The crew was financed by the North-western Association, and by dint of careful expenditure has been able to go through the season

- without any other appropriation. The Athletic Association on April 27 voted that "the Tech Crew be recognized as a branch of Institute athletics by the M. I. T. A. A. All expenses of said crew are to be borne by the crew, and the captain and manager to be allowed attendance with speech at meetings of the Association, but without the power of vote." This gives the crew the right to call itself the Tech Crew, but places the burden of support upon its own shoulders, because the Athletic Association is in no condition to assume it.

The crew has had five races, the first three with the Union Boat Club. Tech won the first and third races, losing the second because an oar-lock broke just at the finish line. In its fourth race of the season the crew defeated the Harvard Second Junior crew by five lengths in a contest over the mile and seven-eighths course. The fifth race was with the Newell Boat Club of Harvard, which was rowed just before the Harvard and Cornell race. The water was tremendously rough, and before the Newell Boat Club made much distance their boat was swamped. The Tech crew, however, was well in the lead at the time.

One of the important happenings of the year was the discussion of the honor system, which was submitted by the Institute Committee to the students at mass meeting for final settlement. The general trend of opinion among the students seemed to be that there was no need for any change in the present method of conducting examinations, as the cheating that the honor system is supposed to do away with is practically a negligible quality. A former student of Washington and Lee University furnished the clinching argument when he stated that for the complete success of the idea it would be necessary for a student to be willing to inform against friends and enemies alike, and that few men would do this. The motion to drop the whole question was passed by a popular vote of 430 to 24.

The Musical Clubs covered themselves with glory last year on their trip through the west. This enterprise had a stimulating influence on the alumni as well as on the undergraduates who took part. A trip through the southern tier is proposed for next year during the mid-year vacation.

The Aëro Club successfully completed and tested its glider, winning all the meets in which it was entered. A great deal of

experimentation was done, and it is likely that in another year a more detailed scientific test will be made and a power machine designed for the purpose of making investigations.

The Tech Wireless Club and that of the University of Pennsylvania have formed an intercollegiate association, and Cornell and Princeton will probably join it next year. The club has already done much to prevent the interference of amateurs with government messages.

The engineering societies have had a very successful season. Every year these societies grow stronger and do more important work. The latest development is the proposed journal to be issued in magazine form next year by the Civil Engineering Society.

During the late spring a meeting was arranged between the students and the Faculty for the purpose of bringing the two bodies together socially. This was a tremendous success. In some cases the entire staff of the course was present. These meetings will be continued next year, and will undoubtedly become an important feature of undergraduate life.

The most important event in athletics was the meeting of the N.E. Intercollegiate Athletic Association which came just before the annual examinations. Tech appeared to have a very reasonable expectation of at least taking second place, but because of preparation for examinations many of the candidates were not in proper condition, and Tech was relegated to the sixth place, with only 12 points, while Dartmouth won with $26\frac{3}{4}$ points, and Bowdoin took second, with $26\frac{1}{2}$ points. The past season of athletics has been one of distinct advance at the Institute in all branches of minor sport undertaken here. This is particularly true of track work and cross-country racing, in which the Institute stands well at the top.

The Tech had probably the most difficult problem that it has ever attempted to solve, but came out with flying colors and most gratifying record. The paper which started out as a daily last fall, was somewhat crude during the first three or four months, but toward the end of the year improved greatly. The course issues that were published during the year were remark-

able in their character, and, when collected make an important addition to the literature of the Institute.

An edition of the book entitled "Concerning the Massachusetts Institute of Technology," published by the undergraduates, was distributed to each undergraduate and to a large number of prospective students all over the country. It was a most commendable effort, and has attracted wide attention among educators.

The Union Dining Room Committee had some difficulty at first in making the lunch-room pay, but by dint of hard work and experiment the latter part of the season was very successful. The dining-room management was in the hands of Morris Scharff, President's assistant, who was assisted by an undergraduate committee appointed by the Institute Committee.

The Union Entertainment Committee provided a varied programme every Friday evening during the season. The present of a projecting reflector by the Class of '10 will be of great assistance in giving future entertainments.

Outdoor Exercise Compulsory

Last September the Faculty established compulsory physical exercise for the freshman class, covering a period of twenty-four weeks, practically from the first of November to the first of May, and have made further innovation this year by allowing the physical director to make outdoor exercise compulsory for two weeks at the beginning and two weeks at the end of the gymnastic term.

There will be next year also instituted competition for a trophy in honor of Thomas Coleman duPont. This will be similar in most respects to a "general excellence" competition. The number of events will be three, each competitor selecting one weight event, one field event, one track event, as he may designate.

The competition will be held once in the fall and once in the spring, and on the total percentages shown will be awarded a replica of the "duPont cup."

TECH MEN IN THE PUBLIC EYE

GORHAM P. STEVENS ('98), began an investigation of the ruins of the Parthenon at Athens, Greece, in 1903, with reference to the identification of the fragments of the wall and pillars that were strewn over the ground. Mr. Stevens made new plans for the Erechtheion, which contained the shrine of Athena and several other deities. In the course of his investigations he made some most important discoveries which led to the identification and the replacement of a great number of fragments among the débris. The work started by Mr. Stevens is now being carried on by Dr. Burt Hodge Hill, director of the American School of Classical Studies at Athens.

FREDERICK M. MANN ('94), professor of architecture at Washington University, St. Louis, Mo., has just been appointed to fill the vacancy made by the resignation of Professor N. C. Ricker, head of the Department of Architecture and Engineering at the University of Illinois. Professor Mann was graduated at the University of Minnesota, and afterwards took a degree at the Institute. He was instructor in architecture at the University of Pennsylvania from 1895-1900. Since 1902 he has been professor of architecture at Washington University.

GEORGE E. HALE ('90), director of the Mt. Wilson Solar Observatory of the Carnegie Institution, was recently elected foreign secretary of the National Academy of Sciences, succeeding the late Professor Alexander Agassiz.

FRANKLIN W. HOBBS ('89), treasurer of the Arlington Mills, was chosen president of the National Association of Cotton Manufacturers at its annual meeting in May. By education and experience Mr. Hobbs is particularly fitted to fill this honorable office, having attended the Bradford Technical College of Bradford, England, where he received training in the foreign methods of textile manufacture, and this experience was supplemented later by extended technical study in the mercantile centres of

Europe. Mr. Hobbs is identified with many public interests and institutions, and is at the present time vice-president of the Alumni Association of the Institute. It is interesting to know besides the president of the Association the vice-president, George O. Draper, the secretary, Dr. C. J. H. Woodbury, and one of the directors, A. F. Bemis, are Tech men.

LOUIS K. ROURKE ('95), recently assistant division engineer of the central division of the Isthmian Canal Commission, has been appointed superintendent of streets of Boston, Mass., to succeed Mr. Guy C. Emerson ('89), who has so successfully conducted that office since he was appointed by Mayor Hibbard.

WILLIAM H. BIXBY ('66-'67), formerly colonel of the Corps of Engineers, U.S.A., St. Louis, Mo., has just been promoted to the head of the corps with the title of brigadier-general, succeeding General Marshall, who reached the age limit of active service June 11.

General Bixby was obliged to leave the Institute because of the death of his father before completing his course. He took a position with a mercantile house, and two years later received an appointment as cadet at the United States Military Academy, from which he was graduated in 1873. Later he acted as assistant professor of engineering at West Point, and afterward he was sent to France, where he took a course of instruction in the French National School of Bridges, Waterways, River and Harbor Improvement Work.

General Bixby's life has been one of great activity and accomplishment in military engineering lines. He has acted on several commissions, notably as president of the board of engineers appointed to make a survey of the Mississippi River from St. Louis to its mouth to ascertain the feasibility of a fourteen-foot channel and its extension from St. Louis to Chicago. Last year he was made special advisory engineer to the National Waterways Commission, and accompanied that body on its trip through Europe, investigating the waterways and waterway improvements there.

General Bixby is probably best known as a member of the board of engineers appointed to determine the maximum length of bridge spans possible in the United States. In 1894 a proposition

was made to build a bridge across the Hudson River with a pier in the centre of the river. Navigation interests opposed the placing of this pier, and the board of engineers appointed to settle the matter sustained the contention of the latter. On the strength of this report the permission of the government for the pier was refused.

HENRY D. SHUTE ('92), has been appointed acting vice-president of the Westinghouse Electric and Manufacturing Company. Mr. Shute has been connected with this concern for seventeen years, having started as an apprentice in 1893. He has served in various capacities and in 1903 he was made assistant to the second vice-president, which position he held at the time of his recent appointment.

CHARLES HAYDEN ('90), is one of the best-known characters in financial circles in Boston. His success has been rapid, and has been achieved by unlimited courage and constant application. While at the Institute, Colonel Hayden took the course in general studies, and showed much interest in economics and kindred subjects. He began his career as a ticker boy. Two years afterward he started the house of Hayden, Stone & Co., and for some time he enjoyed the distinction of being the youngest member of the Stock Exchange. Colonel Hayden is an officer in a score or more of industrial corporations, and is director and treasurer of the Boston Opera Company. For twelve years he served in the militia, first in the Corps of Cadets, then in the Second Brigade, and afterward on the staffs of both Governor Bates and Governor Guild. He is a prominent member of all the important clubs.

CHARLES PERKINS ('83-84), has been appointed member of the School House Commission by Mayor Fitzgerald. Mr. Perkins was graduated from Harvard in 1863, and afterwards entered the Institute. Since 1892 he has been connected with the firm of Peabody & Stearns, the well-known architects of Boston.

SEVERANCE BURRAGE ('92), associate professor of sanitary science, Purdue University, Lafayette, Ind., received the honorary degree of Doctor of Philosophy from Hanover College, Ind., last month.

JOHN A. ROSS ('01), has been called from the faculty of Cornell University to take charge of the School of Mechanical Engineering recently established at Lafayette College.

DAVID VAN ALSTYNE ('86), has recently been elected vice-president of the Allis-Chalmers Company, in charge of manufacturing, with headquarters at Milwaukee, Wis. For some time Mr. Van Alstyne was mechanical superintendent of the Northern Pacific Railroad, and in 1907 he was elected vice-president of the American Locomotive Company, in charge of the manufacturing.

GUY C. EMERSON ('90), who was Superintendent of Streets under Mayor Hibbard, has been appointed consulting engineer of the new Bureau of Municipal Research of Boston. Mr. Emerson's administration as Superintendent of Streets of Boston has been marked by economy and unusual efficiency. During his term he saved an immense sum for the city and at the same time instituted systems which will be of the greatest value to his successor.

New Professor of Modern Languages

Professor E. F. Langley, head of the Department of Modern languages at Dartmouth College, has recently been appointed to fill a similar position at Technology. He will succeed Professor John Bigelow, Jr., resigned.

Professor Langley was graduated from the University of Toronto with first-class honors in modern languages in 1894, winning various scholarships and prizes, among them the medal given by the Governor-General. After studying for some years at Leipzig, Heidelberg and Paris, he came back to the United States, and was appointed instructor of French at Dartmouth, afterward being advanced to the grade of professor. He was given the degree of A.M. by Harvard in 1900 and Ph.D. in 1909. He is one of the most popular men on the Dartmouth Faculty, where he is held in the highest respect as a teacher and a scholar.

STATE AID FOR EDUCATION

The following memoranda in regard to State aid to universities, colleges and technological schools will be interesting to readers of THE TECHNOLOGY REVIEW at this time. The figures have been taken from the advance sheets of the Commission of Education of 1908.

The statistics include 464 institutions which for the year 1907-08 received approximately \$17,000,000 from student fees, \$11,000,000 from productive funds, \$16,000,000 from state or city, \$5,000,000 from the United States and \$14,000,000 from private benefactions.

Twenty-four institutions received from gifts and bequests more than \$100,000 each, including the University of Chicago, \$2,100,000; Princeton University, \$1,000,000; the University of California, \$900,000; Harvard, \$700,000; Bowdoin, \$200,000; and Amherst, \$100,000, etc.

Classified by states, the institutions in Massachusetts received from student fees \$2,000,000; from productive funds, \$1,500,000; from state or city, \$110,000; from the United States, \$60,000; from private bequests, \$900,000.

The aid from state or city for certain states is as follows: Maine, \$125,000; New York, \$770,000; Pennsylvania, \$638,000; Virginia, \$284,000; West Virginia, \$125,000; North Carolina, \$223,000; South Carolina, \$270,000; Georgia, \$190,000; Alabama, \$242,000; Mississippi, \$310,000; Texas, \$283,000; Oklahoma, \$330,000; Arkansas, \$125,000.

From the great states of the north central division: Ohio, \$940,000; Indiana, \$540,000; Illinois, \$1,050,000; Wisconsin, \$940,000; Minnesota, \$1,030,000; Iowa, \$720,000; Missouri, \$430,000; North Dakota, \$163,000; South Dakota, \$210,000; Kansas, \$670,000; Nebraska alone, with \$105,000, falling short of Massachusetts.

In the western division: Montana stands at \$270,000; Colorado, \$420,000; Utah, \$221,000; Washington, \$1,090,000; Oregon, \$400,000; California, \$650,000.

These 29 states far outrank Massachusetts in their financial aid to higher education, and the difference is by no means compensated by greater liberality in private benefactions, which amounted in Massachusetts to \$920,000, in New York to \$1,210,000, in Pennsylvania to \$930,000, in Ohio to \$860,000, in Illinois to \$2,730,000, in Wisconsin to \$370,000, in Missouri to \$470,000, in Kansas to \$380,000, in Colorado to \$470,000, and in California to \$1,060,000.

To mention particular institutions, the University of California received from state or city \$175,000 for increased plant, \$484,000 for current expenses; from the United States, \$54,000; from private benefactions, \$935,000. On the other hand, from student fees, less than \$90,000.

The University of Illinois received from student fees \$206,000; from productive funds, \$33,000; from state or city, \$1,046,000; from the United States, \$54,000; from private benefactions, \$40,000.

The State University of Iowa: from student fees, \$71,000; from state or city, \$440,000.

The University of Maine: from student fees, \$54,000; from state or city, \$125,000; from the United States, \$30,000.

Massachusetts Agricultural College: from student fees, \$3,500; from productive funds, \$14,000; from state or city, \$85,000; from the United States, \$44,000.

The University of Michigan: from student fees, \$323,000; from productive funds, \$38,000; from state or city, \$620,000.

The University of Minnesota: from student fees, \$140,000; from productive funds, \$51,000; from state or city, \$1,030,000; from the United States, \$59,000.

New Hampshire College received from the state \$47,000, and Dartmouth \$20,000. Cornell University, from the state, \$267,000. College of the City of New York, from the city, \$494,000. The University of Oklahoma, from the state or city, \$300,000. Rhode Island College of Agriculture and Mechanic Arts, \$86,000. State College of Washington, \$588,000, besides \$502,000 to the University of Washington. The University of Wisconsin, \$830,000.

PUBLICATIONS OF THE INSTITUTE STAFF

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New Associate Members

The following former students were elected associate members of the Alumni Association on the dates indicated:—

March 30, 1910. George L. Flint, '77.

April 28, 1910. Paul Edmunds Fernald, '08; Tetsutaro Hasegawa, '09; George Rogers Heckle, '99; Willard Vaughan Morse, '02; Samuel Francis Perkins, '09.

June 20, 1910. Thomas Alphonsus Finneran, '02; James Stephen Groff, '09.

MISCELLANEOUS CLIPPINGS

President Maclaurin is right, independence and resourcefulness are quite as important for the success of a young man as is much learning. To "spoon feed" one's self with knowledge is like unto having a little knowledge. Both represent a bad thing. Nobody can hope to win success from mere book cramming. Common sense comes in here as much as anywhere. A wise old preacher once said man's greatest use for prayer was found when he needed common sense, and when his first stock of it was gone he needed prayer again to pray for more. Brains have to be converted into use for the practical purposes of every-day life, or they are not worth the ownership.—*Boston Times*, June 11.

I take the liberty of quoting a sentence or two from an address recently delivered by President Maclaurin, of the Massachusetts Institute of Technology, on "Some Tests of Academic Efficiency." They may interest the rate-payers of the city at the present time:—

"Nothing has surprised me more in moving about this country than to see countless instances of men who have had no adequate scientific training employed in the service of cities and states to do work that really needs a very considerable scientific equipment. They are amateurs doing the work of professionals. We must educate our communities in such a way that it will shock their moral sense to see a man, let us say, administering a department of public health who knows little or nothing of biology or bacteriology or any of the other fundamental sciences that enter into the very heart of his work."—"Ratepayer," in *Toronto Star*, June 6.

In an address to the City Club some time ago, during a discussion of the relation to the city of its different educational institutions, President Maclaurin dwelt on the importance of thorough-going training in the proper management of a modern city. He said that one of the primary difficulties in city government was to teach the community a respect for the real expert, and a thorough distrust for the amateur in science; and that it was of the highest importance to have properly equipped educational institutions that could produce a sufficient supply of thoroughly trained experts as permanent officials in city administration. The Institute of Technology has already rendered splendid service in this direction. It is interesting to note that Mr. Rourke, who has just assumed the duties of superintendent of streets, is a Tech man, who has exempli-

nied the value of Tech training by his able handling of a great problem of administration in the Panama Canal. He succeeds Mr. Emerson, also a Tech man, who during the last two years has greatly improved the condition of our streets, and by the application of scientific methods has reduced the cost of administering his department nearly a million dollars each year.—*"Alumnus," in Boston Transcript, June 11.*

The registration of opinion by the undergraduates at the Institute of Technology, 430 to 24 against adoption of the so-called honor system of conducting examinations under which no professors or proctors would be in the examination-room at the time, is a striking indication of opinion, and a wise one, probably. It does not reflect any mutual distrust, rather the contrary. Putting young men "on their honor" is an excellent ideal, but it is not always necessarily an altogether commendable practice. It has not been proven that it particularly develops a young man's sense of honor. Young men who are honorable by nature need no such theatrical stimulation of their honor. Others, or men of weakness, find temptation there, and may be led to a step which must have a deteriorating and debilitating effect upon them in future. Honor is better taught and emphasized in other ways. Presence of proctors or others of authority in an examination-room is not at all a reflection upon the honor of the young men undergoing examination. No honorable man so interprets it.—*Boston Advertiser, May 6.*

During the past year thirteen men, including four candidates for the Ph.D. degree, have been working in the research laboratory of physical chemistry of the Massachusetts Institute of Technology upon researches in theoretical and physical chemistry.

One of the main lines of work is the continuation of the research upon the properties of salt solutions in relation to the Ionic Theory, which, with the view of developing that theory, has been carried on for a number of years under the direction of Professor A. A. Noyes. The special subjects at present under investigation are: (1) the transference numbers of tri-ionic salts by Dr. K. G. Falk, with the purpose of determining whether intermediate ions, such as KSO_4^- or PbNO_3^+ , exist in considerable quantity; (2) the electrical conductivity of mixtures of salts, by Mr. A. C. Melcher, Dr. W. C. Bray and Mr. F. L. Hunt, with the purpose of establishing the general law governing the ionization of salts; and (3) the solubility of salts in the presence of other salts, by Dr. W. D. Harkins, with the purpose of determining empirically the form of the law of solubility effect which must be substituted for the inexact mass-action form of that law. This line of research has again been aided on the financial side by a grant of \$3,000 made to Professor A. A. Noyes by the Carnegie Institution of Washington.

Another of the main lines of research in the laboratory, which is being carried out by graduate students under the direction of Professor G. N. Lewis, is the experimental determination and computation of a system of values for the free energy of chemical substances analogous to the system of values for the total energy previously developed by thermochemical investigators. The problem is one of fundamental importance to the science of chemistry, since from the free-energy data for the substances the equilibrium of the chemical reactions in which they are involved can be computed. The special reactions now being studied in this direction are: (1) that between sulphur and water, producing sulphur dioxide and hydrogen sulphide, by Mr. Merle Randall; (2) that between nitric oxide, nitric acid and water, producing nitrous acids, by Mr. Arthur Edgar; and (3) that between chlorine gas and chlorine-ion in aqueous solution, which is being studied by electromotive force measurements by Mr. F. F. Rupert.

Dr. W. C. Bray has continued the studies of the equilibrium of some chemical reactions begun a few years ago in this laboratory by Mr. G. M. J. Mackay; namely, of those between solid cuprous iodide, iodide and cupric iodide in solution, between potassium iodide and polyiodide in solution and between iodine and water.

During the past year, articles describing theoretical studies upon the newly developed principle of relativity have been published by Professor G. N. Lewis and by Mr. R. C. Tolman; and an article upon the quantitative application of the theory of indicators to volumetric analysis has been prepared by Professor A. A. Noyes. An experimental study of indicators from this standpoint has been undertaken by Professor M. S. Sherrill.—*Science*, May 27.

A recent number of the Bulletin issued by the Department of Health of New York contains as its leading article a paper written by William T. Sedgwick, of the Massachusetts Institute of Technology, on sewage pollution. Referring directly to Niagara Falls, the article says in part: "One of the worst plague spots, if not the very worst, in respect to typhoid fever in the United States to-day is Niagara Falls, in which the death-rate from that well-known and preventable disease averaged for the ten years, 1897-1907, 134.4 per hundred thousand, the highest during that period having been 181.6 and the lowest 107.9 per hundred thousand. And a careful investigation by Professor Ogden, of Cornell University, has shown beyond question that this enormous death-rate is due almost wholly to the pollution of the public water supply by the sewage of the city of Buffalo. For the citizens of Niagara Falls this condition is bad enough, but, if the consequences were limited to the people of Niagara Falls, the rest of the country might look on with comparative composure. In point of fact the sewage pollution of the water supply of Niagara

Falls is a matter not merely of local, but of national concern, for Niagara Falls is visited annually by hundreds of thousands of people from all over the country, many of whom, after drinking the sewage-polluted water supply, carry away with them the seeds of typhoid fever with which they are afterward stricken, and some of them have died in remote parts of the country, or even beyond the country. Furthermore, because every case of typhoid fever wherever it occurs is liable to become a focus of fresh infection, it is impossible to set any limit to the amount of sickness and death produced all over our country and even beyond its borders by the pollution of the water supply by the sewage of the city of Buffalo. For these reasons I consider the state of affairs which has long existed at Niagara Falls disgraceful both to the state of New York and to the United States of America, and am glad to be informed that active measures are under way for the introduction of an improved water supply into this fever-stricken community."—*Fire and Water Engineering*, April 6.

In my opinion the chief original offender is the increased supply of gold which has been so marked during the past fifteen years. Suppose \$100,000,000 of new gold is mined in this country during a given year. After being coined, it will be spent by the owners in exchange for commodities or deposited in banks by which, in turn, it will be loaned. Neither miner nor bank wishes to keep the gold a day longer than necessary. A wheat-grower may withhold his grain from the market in the hope of getting a higher price, but the miner and bank never think of the price of gold,—whether more could be purchased a year hence by withholding it from the market: their action is instantaneous, and immediately creates a demand for commodities. The only condition on which the bank might retain the gold would be to employ it as a reserve on which credit currency of a far larger amount might be created.

At the beginning, prices of all commodities will not be affected equally, but only those for which there is a special demand, owing to the use of gold. Gradually, however, as the wages of labor in the industries first affected become higher, and as the demand for other commodities tends to widen in ever-increasing circles, the general level of prices tends to rise, and will so continue until an equilibrium is established. This process of price-making, therefore, is not an illustration of a conscious balancing of the account of gold with the volume of commodities, but the result of a change in the relation of supply and demand.

When prices advance, other agencies find a favorable opportunity to secure special advantages. Industries protected from outside competition by tariffs and those which can be easily and effectively combined under acts of incorporation or trade agreement will be stimulated anew to seize every point of advantage which the situation offers. Under cover of rising prices due to a hidden cause, they can with comparative

safety add many an increase which in the general movement goes undetected.

But there is still another cause which accounts for the rise of price in food products. This country is increasing in population, and the area available for the staples of agriculture is not increasing. This population is pressing more and more upon the land. The land upon which cattle formerly ranged is devoted to other uses. The number of cattle in this country is less by 5 per cent. than it was a year ago, and the number of people to eat meat is 5 per cent. greater. The price of meat may be lessened by a decreased demand, but it is not likely to be materially lowered unless there are economies in the method of distribution. Beef trusts and uneconomical methods of retailing are doubtless responsible for a part of prevailing high prices, but, after all, it is the producer who will set the price. With increased cost of food, wages in general must be higher, and this in turn will raise the cost of manufacture in all industries. When the initial cause ceases to operate, an equilibrium will be established, and then expenditure, as represented by prices, will be adjusted to income, as represented by gold.—*Professor Davis R. Dewey, in the Delineator.*

In the words of the 1910 Tech Show Advisory Council, "This is the first time that the Institute Committee has been called upon to confirm the appointments of the different managers of the Tech Show, but it is the opinion of the Advisory Council that, inasmuch as the Show is given 'under the auspices of the student body . . . for the benefit of undergraduate athletics and other Institute activities,' this body, as the official representatives of the students, should confirm this action."

Contrary to placing too much power in one place, this is putting the right kind of responsibility up to the most representative committee. In any form of government there is bound to be loss of motion unless the work is centralized; that is, unless co-operation exists. The best way to get this co-operation is to let a group of representatives from the various interests get together to determine collectively what is best.

This body is so elected, and cannot be controlled by any specific interest, and yet it represents, in general, the advancement of the Institute. The various branches working separately cannot realize or act on their responsibility to the whole, while, if the responsibility is directly delegated to them, they must feel its influence, and consequently shape their separate duties in accord with the common trend.

The one danger that confronts this centralization is that the separate activities may lose their individuality. This must be avoided by each activity in the carrying out of its specific details. Variety is the spice of life, but it must be left to the specific details and not to the general trend of advancement.

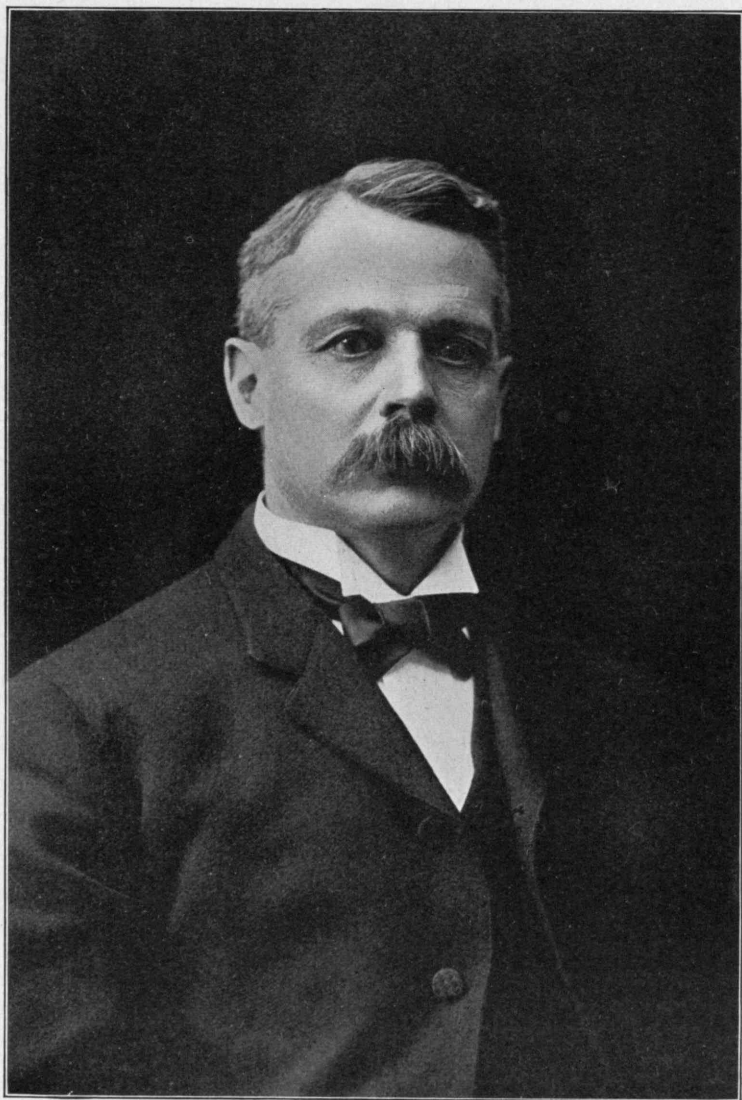
The one word of co-operation must be uppermost in this development it is to be successful. It is the keynote of all concentration. If kept there, the whole Institute life will benefit by a rational, sane, student life.—*The Tech*, May 12.

Our democracy to-day is exposed to many grave dangers. One of these is due to the current notion, founded on a false theory of democracy, that one man is as good as another, and, therefore, that it doesn't matter very much who gets a job, with the proviso, perhaps, that he be reasonably honest. This is a monstrous doctrine, and is not much improved in its more cynical form that any man can fill the post that he is clever enough to get. The world is far too complex, and we must demand not only intelligence, but trained intelligence. Remember, too, that most of the complexity of modern life is due to the social and industrial revolution brought about by the applications of science, and that the business man who is not imbued with the scientific spirit is an anachronism. We must keep in view the dangers that arise from the spirit of extravagance that is so much abroad. It may easily drive us on to the rocks. Most carefully must we keep a lookout for means of avoiding waste. I have little doubt that half the wealth of the next generation will come from new applications of science that will show us how to avoid waste in our industrial operations.—*Richard C. MacLaurin*, in *Leslie's Weekly*.

But the obstinate college teacher, it seems, is bent on teaching English as "she is *not* spoke" or wrote, and as though no one had ever thought of the Linguistic Simple Age. Even in the technical school it is assumed that no kind of engineer is better off in the United States for inability to use English, and so, while the student puts up a stout resistance, the teacher goes bravely on devising new ways of attack and fresh schemes for teaching the young American his own language. For instance, Professor A. T. Robinson, of the Massachusetts Institute of Technology, who thinks that "English composition may be made the basis of logical cultivation of the thinking powers and the means of awakening in the mind the love of broader scholarship," describes in fourteen columns of *Science* (Nov. 12, 1909) the work of the English Department at the Institute. Professor Robinson writes especially about English composition. To this subject are devoted four hours a week for fifteen weeks and two hours a week for an additional fifteen weeks, all in the first year of the four-year course. Professor Robinson begins his work with the safe assumption that the student has no particular literary tastes, and he endeavors "to give the incoherent and undeveloped mind respect for its own productions,—to remove, as far as may be, the embarrassment of his own too critical presence; and, finally, he attempts to show, as no

rules of English composition derived from the study of models of literature ever can show, a rational aim in writing and an easily attainable attitude of mind which will lead to success." What a powerful and even lovely thing is a clear major premise which one may use as a battering-ram, we won't say blindly, but rather stoically and vigorously against the whole intrenched ignorance of the world! At the Institute the class in composition writes. Each student chooses his own subject,—something he knows about, from "The Duties of a Stage Hand" to "The Working of a Small Steamer." The class is not used as an audience, but in any particular case only those who may be interested in the subject and of these only one is chosen as critic, who may get into a close relation with the writer. The writer is not tempted to write down to the possible low taste of a crowd. The teacher himself must be very human, very sympathetic, and put himself in the attitude of one to be interested and informed, so that by degrees his taste become predominant. And enlightenment Professor Robinson did receive. One youth told him something new about the social life of boys, another revealed the Colorado forest, and German school life and customs were interestingly explained by a third. The student learns that composition has the "look of a practical art," and is part of "the business of dealing with men." Sometimes the students go with the instructor to look at something, say a horse or "the façade of a building," take notes, and then return to write their reports. They acquire the idea "that fact is the background of all writing." Professor Robinson intimates that he does his best where so much sympathy and capacity for at least a little of all knowledge are so necessary. It is very likely that Professor Robinson's very best is quite good.—*The City College Quarterly, New York.*

Professor Dugald C. Jackson, head of the department of electrical engineering at the Massachusetts Institute of Technology, has received word of the bestowal of a signal honor in his election to the presidency of the American Institute of Electrical Engineers. Professor Jackson was a unanimous choice for the position. Some of the greatest electrical engineers of the country have held the honor in the past, and the election of the Technology professor is considered a tribute to the college. Among the men who have served the society as executive head are Alexander Graham Bell, Frank J. Sprague, Charles P. Steinmetz, Elihu Thompson and Edward Weston.—*Buffalo Commercial, June 6.*



WILLIAM JACKSON, 1865-68

(Photo by Notman)

NEWS FROM THE CLASSES

1868.

PROF. ROBERT H. RICHARDS, *Sec.*, Mass. Inst. of Tech., Boston.

WILLIAM JACKSON.

William Jackson, 1865-68, for twenty-five years city engineer of Boston, died at his home in Brighton, June 30, 1910.

It is a remarkable tribute to Mr. Jackson himself and to the engineering profession, of which he was a leading and respected member, that from his appointment as city engineer, at the age of thirty-seven, until the day of his death he conducted the affairs of an exacting municipal office, charged with the expenditure of millions of dollars of public funds, so honestly and so efficiently that he stood above politics, surviving all municipal political changes. He was universally regarded as an official whose services were invaluable to the city.

William Jackson was born in Brighton, March 13, 1848, the son of Samuel and Mary Wright (Field) Jackson. He received his early education in the Brighton public schools, and lived there the whole of his lifetime. His training for his life-work as a civil engineer was obtained at the Institute, where he took the full course with the Class of '68 until May 4, 1868, when he left, without receiving a degree, in order to take a position in the city engineer's office, Boston, on the staff engaged upon the construction of the Chestnut Hill Reservoir of the Boston Water Works. At that time no Institute degrees had been conferred,—their value was not appreciated; and, no doubt, to the youth of twenty an engineering position, with assured remuneration, seemed more attractive than a piece of sheepskin of unproven worth. In after years it was one of Mr. Jackson's regrets that he had not remained for his degree, and throughout his life his interest in Technology and all that pertained to her welfare was most keen.

From 1870 Mr. Jackson was engineer for the town of Brighton, and in private practice until Brighton was annexed to Boston in 1873, when he again entered the Boston city engineer's office where for three years he was engaged upon miscellaneous work, including surveys for the introduction of water into Brighton and West Roxbury. From 1876 to 1885 he was assistant engineer on the Boston Main Drainage Works, a notable and difficult engineering undertaking. In April, 1885, upon the sudden death of

City Engineer Henry M. Wightman, Mr. Jackson was appointed city engineer, which position he held continuously until his death. In addition to his duties as city engineer, Mr. Jackson, at different times, did other important engineering work. He was chief engineer for the Harvard Bridge Commissioners, 1887-91; chief engineer of Charlestown Bridge, 1896-1900; and chief engineer, Cambridge Bridge Commission, 1898 until his death. In the fall of 1898, in company with Mr. Edmund M. Wheelwright (M. I. T. '75), consulting architect to the Cambridge Bridge Commission, he visited Europe to study notable bridges there preparatory to making designs for a monumental structure for Cambridge Bridge.

He was a member of the Rapid Transit Commission of Boston in 1891-92, and a member of the Boston Statistics Commission from 1898 until he died. From 1902 to 1904 he was a member of the special commission on the abolition of grade crossings in Attleboro, Mass., and at his death had been for three years a member of similar commissions on the abolition of grade crossings in Foxboro, Westwood, Canton, Sharon and Mansfield, Mass. He served as consulting engineer to the Cambridge Water Board upon the construction of the Hobbs Brook Conduit, 1904; consulting engineer to the Shore Road Commission, Brooklyn, N.Y., 1896-97; and consulting engineer to the Massachusetts Harbor and Land Commission on the Commonwealth Dock, South Boston, in 1899. He was also a member of the Approving Board appointed under legislative act in 1907 to pass upon plans for the development and extension of the drainage systems of Boston. On several occasions, when a vacancy occurred at the head of another city department, Mr. Jackson was designated to temporarily fill the position until a permanent head could be selected.

The breadth of Mr. Jackson's interest in general affairs, as well as in matters pertaining to his profession, is shown by the following list of organizations of which he was a member at the time of his death: Union, Art and Technology Clubs of Boston; Boston City Club, Point Shirley Club, Boston Dining Club, Strollers' Club of New York, Allston Golf Club, Commonwealth Riding Club, the Masonic Fraternity, Boston Chamber of Commerce, Technology Alumni Association, Society of Arts, American Association for Advancement of Science, National Geographical Society, Bibliophile Society, National Municipal League, American Civic Alliance, American Civic Association, New England Historical and Genealogical Society, Bostonian Society, Society of Colonial Wars. Of professional societies he had been a member of the Boston Society of Civil Engineers since 1874; a member of the American Society of Civil Engineers since 1884, and a director of that society in 1902-03-04; and a member of the New England Water Works Association since 1890.

Mr. Jackson married, on April 27, 1886, Miss Mary Stuart

MacCorry, of Boston. Mrs. Jackson died March 27, 1905. He is survived by a son, William Stuart Jackson.

William Jackson was a man of high ideals and notable ability, modest and unassuming, eminently fair in his dealings with others, and faithful to every trust imposed upon him. Of a retiring disposition, his circle of intimate friends was comparatively small, but to those privileged to come into close association with him he was a true friend and a lovable man. He won the regard and hearty support of his subordinates and inspired the confidence and respect of all who knew him. He was the last man to have willingly permitted words of eulogy to be spoken, and to the many who knew him no eulogy is needed to set forth his life in true perspective. Of the numerous tributes of the press, an editorial in the Boston *Herald* is, perhaps, most representative of the man:—

The record of a life spent in the service of the public is in itself the eulogy of City Engineer William Jackson. From boyhood to death he was a public servant, filling one post of duty after another, meeting every responsibility great or small, preferring public service to the greater emoluments which he might have earned in private enterprise. He was a patriot, even though he shouldered a tripod instead of a musket.

F. H. F.

Robert H. Richards starts June 10 on a Summer School with his mining students. He is accompanied by Professor Bugbee and Mr. Hayward, both of the Mining Department of Technology, and some ten students more or less, the number not being quite settled. The party will go to Buffalo, and visit some of the works driven by the power derived from the Falls. They will then take an ore steamer and go up to Duluth, where they will see the monster ore docks, the largest in the world, that are used for shipping mine ores to the various lake ports. They expect to see an iron furnace at Duluth and certain other industries which will prove very interesting and instructive. They will then proceed to the Mesabi district. There they will see the remarkable ore deposits which are mined by steam shovels in open pits, with benches where the locomotives run in with the empty cars at one end of the pit and run out with the full cars at the other, where iron ore is mined at fabulously low figures, sometimes having been stated as low as nine cents a ton. They also expect to see some underground mining in that district, and there is a very large crushing plant that has recently been put in for concentrating iron ores. They expect to have the privilege of visiting that. The next move will be the Michigan copper region at Keweenaw Point, where they will visit one or more of the mines underground, and will also see some of the finest mining machinery in the world, and the enormous mills for concentrating the native copper rock and the smelting plants for bringing

in the pure metal for shipment to the market. He will take along his lantern slides, and, if a desire is expressed from groups of miners to see these slides illustrating ore concentrating apparatus, he will be glad to exhibit them. The next move will be to Sudbury, Ontario, where are the great nickel mines from which the nickel for our war vessels is largely obtained. The party have received a very kind invitation to visit a mine and smelter at that point. And, finally, they will go to Cobalt, where the extraordinary development of silver has so recently been made, and they expect to have a good opportunity to study the mining and milling of the silver of that district.

1875.

EDWARD A. W. HAMMATT, *Sec.*, Hyde Park, Mass.

The Class of '75 did not make much of a showing at the Pops this year, as Bowers and Hammatt were the only members at the table, though Fish sat with '74. It was not the only class to have a small representation, however.—I understand that Aspinwall has been very sick, but is now better.—Samuel Edgar Allen died at Boston, May 30, 1910.

1876.

JOHN RIPLEY FREEMAN, *Sec.*, 815 Banigan Building, Providence, R.I.

Willis E. Davis ('77) died by his own hand on the White Star liner, "Oceanic," as she was nearing New York in May. Mr. Davis was suffering from a nervous breakdown due to the sudden death of his wife, which occurred a few months before his own. The fatal act was committed during a period of mental derangement. Mr. Davis resided in San Francisco, Cal. He devoted his talent to electrical engineering, and after retiring he took up landscape painting, which he followed largely for his own gratification.

1877.

RICHARD A. HALE, *Sec.*, Lawrence, Mass.

A small representation of the Class of '77 was present at the general class gathering and Pop Concert on Tuesday, June 7. Those who attended were Glover, Fairbanks, Stimpson and Hale.—W. M. Peters, '77, who has not been heard from for many years, is designer with the Derby Desk Company at Somerville, Mass.—H. M. Lane, '77, of the firm Lane & Bodley Company, is engaged in the manufacture of steam-engines at Cincinnati, Ohio.—The



APOTHEOSIS OF THE CLASS OF '85

class directory is approaching completion, and, although some have failed to send photographs or an account of their work, it has been considered advisable to make no further delay in its publication.—W. M. Whidden, '77, of the firm of Whidden & Lewis, has designed many prominent buildings in Portland, Ore., where he has been located for many years.—F. B. Locke has been appointed Commissioner of Public Works at North Adams, Mass.—George A. Freeman is a member of the executive committee of the New York Yacht Club.

1882.

WALTER BRADLEE SNOW, *Sec.*, 170 Summer Street, Boston, Mass.

Herrick and W. B. Snow were the sole representatives of the class at the Pop Concert.—The present address of Frederic B. Cochran is 111 Broadway, New York City.—H. E. Snow, whose address has been unknown for a long time, is now reported to be advertising manager of the Chicago *Tribune*.

1884.

HARRY W. TYLER, *Sec.*, Mass. Inst. of Tech., Boston, Mass.

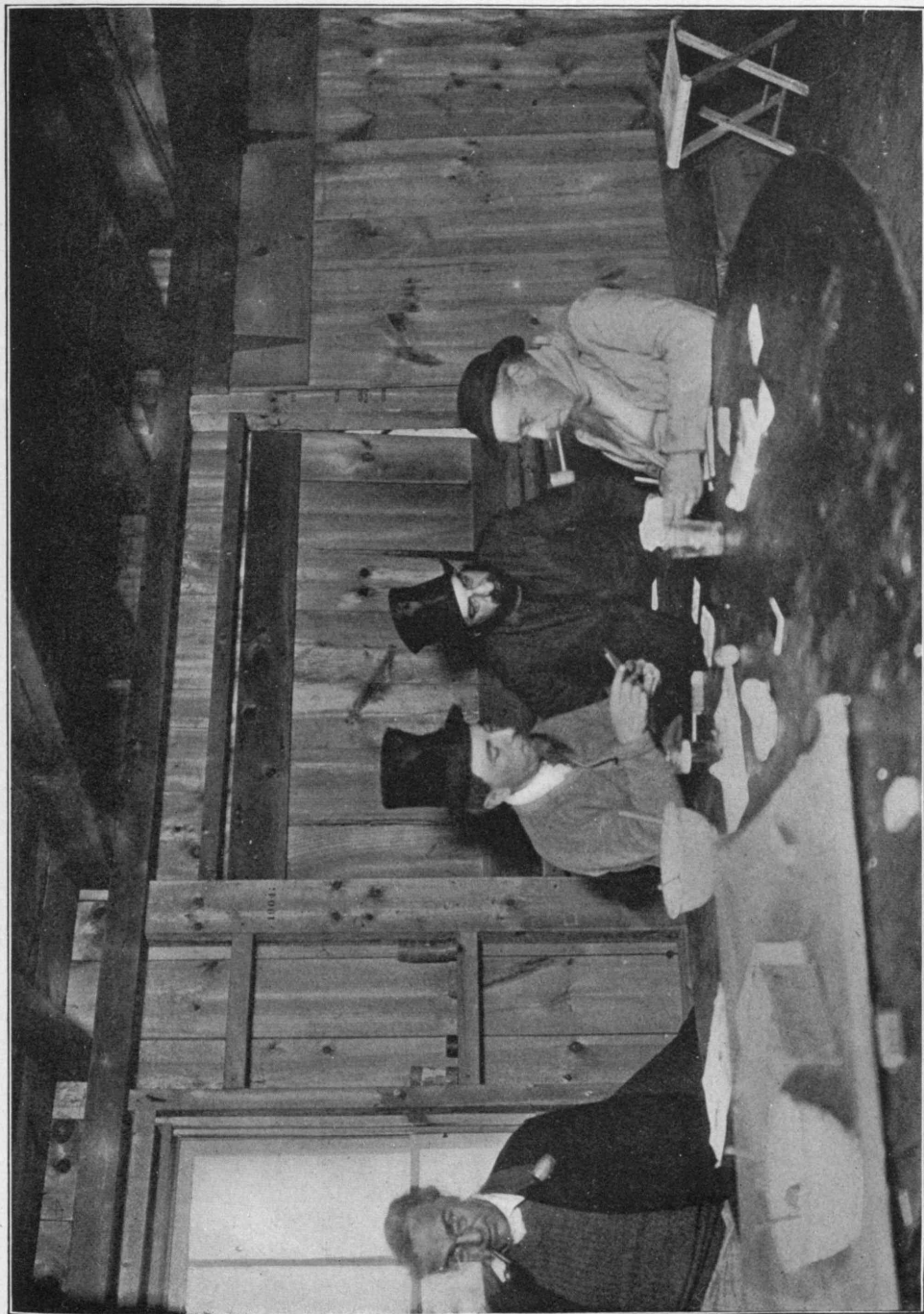
Miss Margaret Powell Robinson, daughter of Mr. C. Snelling Robinson, of Youngstown, Ohio, was married in Youngstown, Ohio, on May 16. So far as the secretary is aware, this is the first marriage of a son or daughter of '84,—another indication that since our twenty-fifth anniversary we are aging.—Colonel and Mrs. D. A. Lyle have revisited Boston recently after spending some months in Europe. Colonel Lyle has been retired from the United States army for age, but the evidence appears to be merely statistical.

1885.

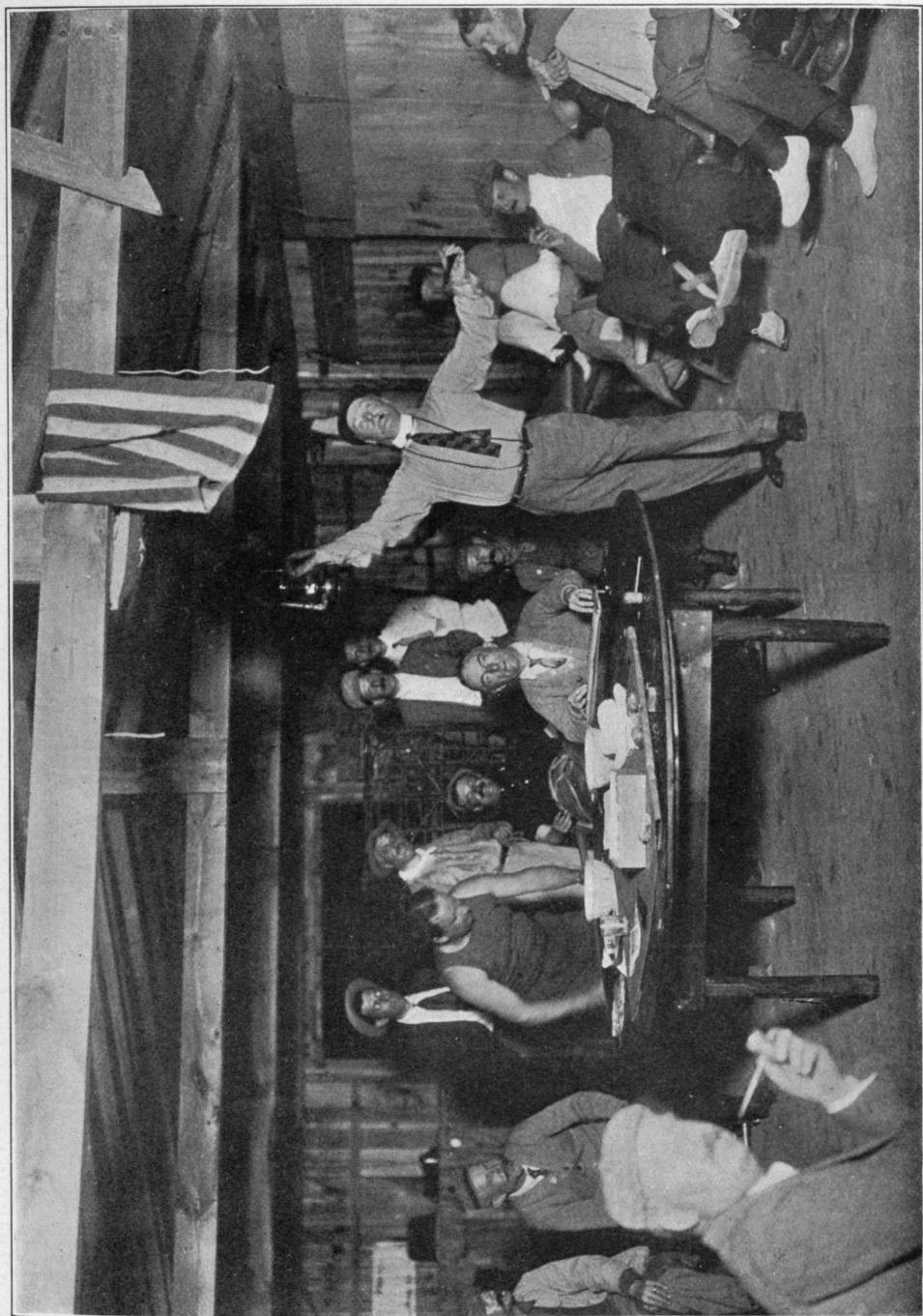
I. W. LITCHFIELD, *Sec.*, Mass. Inst. of Tech., Boston, Mass.

The most important event in the history of the class of '85 was the twenty-fifth anniversary, which was celebrated at Dr. Schubmehl's camp at Little Asquam Lake, N.H., June 16, 17, 18 and 19. The following men were present: Ames, Pierce, Little, Brown, Mullins, Worthington, Steele, Dodge, Osgood, Hildreth, Page, Baker, Homer, Dewson, Richardson, Robertson, Richards, Mumford, Morss, Lyon, Frazer, Hugh MacRae, Fred Kimball, Fry, Nye, Spalding, Dawes, Don MacRae, Plaisted, Martin, Wallis, Kimball and Litchfield,—thirty-three in all. It was a grand and glorious occasion, full of too many pleasant and funny

and good things to remember, if one wants to do anything else, and to it came the sons of '85 from the four corners of the earth. Costumes provided by the members were scientifically interesting because of the proofs that there is much beyond the infra-red and the ultra-violet not previously discovered, and because, when well concealed by disguises, the general average of pulchritude was considerably raised. A boat cannon that announced new arrivals, the spirituous adviser in his shrine and the chef at the kitchen range were all kept busy welcoming new recruits, to such an extent that the spirituous adviser had little opportunity to work at his trade as chaplain for any sustained period. We doubt very seriously if any one man could give much of a description of what was done during the different days at camp. Several of the men had not met before with the class for twenty-five years, and many others had not been able to meet with us for many years, so that it was a general reunion, and these four days were so absorbingly delightful that they were soon gone as a tale that is told. The first delegation arrived at noon of the 16th, and took possession of Camp Walker in the name of the class by orders of the only Magnum Gazabo ever born in captivity and now nearly extinct. The Gazabo arrived later in the evening, having been wrecked *en route* by Morss, who insisted on trying to climb trees with a high-powered automobile, and who during the trip broke all records for running a machine without gasoline. The Gazabo was somewhat worn and spent on his arrival, having been obliged to use nearly his entire vocabulary on the way up to camp, but he immediately took charge of things, and commanded all hands to bend the knee! It rained a little the first day, and, as it was a bit cool, a roaring fire in the great fireplace made the day supremely cheerful. There was a little rain on Friday, but no one really knew anything about it, and, as the day was warm, we had a grand opportunity to talk over old times and compare notes, and get acquainted with those who had been absent so long. On Friday night we had a grand song service, and afterward the secretary called for information regarding the absent members,—not one was forgotten. On Saturday occurred the silver wedding anniversary of the class of '85, and the Gazabo ordered dress parade at ten o'clock. The results were perfectly and completely overpowering. It is likely that history has nothing to approach the startling creations that appeared in the grand Amazon march on that Saturday morning. It was a beautiful day, and the photographers kept so busy that nearly all the forenoon was taken up in this pleasant occupation. After lunch the day was devoted to preparations for the Christmas dinner and silver wedding breakfast of the class, which was celebrated with steak and onions at 6.30 P.M. The ladies of Dr. Schubmehl's family were invited, including a Miss Rice, a friend of Mrs. Schubmehl, who was visiting her. The ladies were welcomed at 6.30, the men being draped



AFTER TWENTY-FIVE YEARS



BONE OBLIGATO BY BILLY SPAULDING, '85, NEE RICE

in their best parlor manners, and, when we say that Miss Rice was a peach of the first class, it will be easily understood to what heights of gallantry the class average reached. The ladies were escorted to the mess hall by the handsomest bachelors, Director Richards leading off with Miss Rice, and when, after the first course or two, the lady in question removed her hat and wig, it was discovered that Billy Spalding had successfully fooled the entire class, making even a bigger hit than he did in the Tech Minstrels at Union Hall in 1884. After dinner Chaplain Pierce distributed the presents from a hectic Christmas tree, making appropriate remarks as befitted the individuals who came within the focus of his caustic spectacles. Artie Plaisted acted as Sancho Panza, and, as the correspondent from Pochuck would say, "a very enjoyable time was had." After dinner there was a hot tamale dance in the Recreation Hall, with some music. We had charming weather Sunday, and during the day the fellows, realizing that the time for communion was short, sat about in little groups, which continually kept changing as the day wore on. Most of the men left on Monday morning with a happy feeling "that won't come off" around the cardiac region.

1887.

EDWARD GALBRAITH THOMAS, *Sec.*, 36 High Street, Brookline, Mass.

H. D. Sears, Goss, Sprague, Stewart, Crosby, Mulliken, Lane and E. G. Thomas represented '87 at the Pop Concert. Goss was the real stranger among us, was warmly welcomed and promises to come oftener in the future. Like many other '87 men, he is "taking to the woods," and spends most of the time he takes from business in fishing and shooting from a camp he has built on the St. Maurice River, north of Quebec.—Sears is a member of the Eternity Fish and Game Club on the Saguenay River, and at present is having a log cabin built from designs furnished by Wakefield. This cabin will be 30 x 50 feet, will contain six rooms, with fireplace, piazza, and many comforts. He hopes to occupy the house this fall.—Lane has a camp at Centreville.—Adams is a member of the Gull Island Gun Club, while Sever has just bought a 25-foot sloop, and proposes to sail from New York to his home in Kingston, where he will spend the summer.—Todd, as usual, has "seen" Goss, Sears *et al.* above referred to, and raised them some. The following is from the Baltimore papers:—

The home of Mr. Frederick C. Todd at Chattolance, which was designed by Architect Howard Sill, will be ready for occupancy before the close of the summer. The structure will be two and a half stories and

of frame construction. It will be one of the most attractive homes in the community.

In addition to his residence Mr. Todd is also having built on the grounds of his home a large log cabin, a reminder of happy days spent in the Canadian woods. "Tommy" Hoar from New Brunswick, his guide and companion in all his recent hunting trips, is designer and builder.

It would be impossible for "Fred" Todd to build an ordinary, commonplace house, just as it would be impossible for him to do anything that did not have the element of the unusual or unexpected about it. He believes that we are too civilized nowadays anyway, and that the primitive man was healthier in both body and mind because of his mode of existence. In planning the new home, therefore, he decided to have a genuine log cabin as the real home and to build a more conventional type of house, or as conventional a house as "Fred" Todd could stand for, around this cabin. There are log cabins and log cabins, but only the real one would suit, hence the Canadian trapper-architect-guide.

Pending the construction of his home, which he is superintending himself, Mr. Todd is passing the summer months in a tent, refusing to be bound in by walls of greater thickness than canvas. Mrs. Todd is absent in Japan for the summer, visiting her sister there, and his friends are therefore wondering whether he is keeping bachelor's hall or bachelor's tent. At any rate, Green Spring Valley welcomes him with open arms because of their long knowledge of the constant surprises he has in store for them. Whether it is a dinner or card party or just an ordinary every-day entertainment, it can always be counted for a certainty that "Fred" Todd will reckon out some different and unexpected way of carrying it through. If mere popularity counted for anything, he would have been governor of the State, mayor of the city and United States senator long ago. As it is, popularity counting for much less than political sleight-of-hand, he is contenting himself with the prospect of a long and prosperous log-cabin administration.

—Mrs. Fred Bullard is moving her home to South Orleans, Mass. Her boy Theodore is entered at the Middlesex School, and will probably begin his studies there this fall.

1888.

WILLIAM G. SNOW, *Sec.*, 1108 Penn Mutual Building, Boston.

William W. Underhill, for many years connected with Fuller & Warren Company, manufacturers of heating and ventilating apparatus, is now of the Stone-Underhill Heating and Ventilating Company, with offices at 17 Milk Street, Boston.—Alfred H. Sawyer is located at 120 Milk Street, Boston, in charge of the interests of the Commercial Fibre Company, which has a mill at Braintree, Mass.—Stone, Sawyer, Clafin, Blanchard, Wood, Gage, Underhill and Snow represented the class at Tech Night at the Pops.—William G. Snow, recently made chief engineer of Warren Webster & Co., delivered a lecture on "Ventilation in its Relation to Health" at Cornell University, May 24.—E. S. Webster is now

travelling abroad, and on his return Charles A. Stone leaves for an extended sojourn on the other side.

1889.

WALTER H. KILHAM, *Sec.*, 9 Park Street, Boston, Mass.

Hobbs has been elected president of the National Association of Cotton Manufacturers. This association was founded in 1854, and consists of about one thousand members, who are located in all parts of the country. Meetings are held in the spring and fall of each year, and, as stated in its charter, the object of the association is:—

“For the purpose of encouraging scientific investigation and experiment as to the methods of manufacturing cotton, collecting and imparting information relating to this industry, promoting social intercourse among its members and establishing and maintaining a library of works on textiles in the city of Boston.”

—Orrok writes as follows:—

I have made two trips to Chattanooga, where our people are interested in the dam and power station being built at Hales Bar, Tenn., for the Chattanooga and Tennessee River Power Company. George F. Rowell, Tech '96 (?), is the resident engineer there, and the work is quite difficult and very interesting. My first trip was broken off by my wife's illness. I nearly lost her, but she is better now.

Dunphe, '89, was chairman of the smoker committee for the Brooklyn Engineers' Club, of which I am president for this year. The smoker took place April 7, and about twenty Tech men were there out of four hundred. It was a good smoker. Dunphe knows how.

Orrok's paper on the “Seawall or Bulkhead in Connection with Power Stations and Manufacturing Plants,” read before the Connecticut Society of Civil Engineers last February, has been reprinted by *Engineering and Contracting* and also by the *Engineering Record*, and the General Electric Company has reprinted his paper read before the American Society of Mechanical Engineers at the Washington meeting last June. This paper was entitled “The Small Steam Turbine,” and created quite a discussion. One of the Boston meetings was devoted to it also. He is doing more or less research work, however, on the transmission of heat through tubes (condenser practice).—W. W. Underhill has formed a new corporation to be known as the Stone-Underhill Heating and Ventilating Company to carry on the business of heating and ventilating apparatus, and has its headquarters at 17 Milk Street, Boston.—Hollis French has under construction a new plant for the Hallet & Davis Piano Company, which is to be built at Neponset at a cost of between \$500,000

and \$600,000. The building will be of reinforced concrete, 300 by 80, and five stories high.—Hazard is the general manager and chief engineer of the Orleans County Quarry Company at Albion, N.Y.—William S. Johnson has been retained by the city of Geneva, N.Y., to investigate sewage disposal and water filtration problems.—Rankin has been re-elected president of the Southern Chapter of the American Institute of Architects.—Pike has been elected president of the Philadelphia Electrical Contractors' Association.—The Boston *Herald* of May 23 has a striking portrait of Fiske in his capacity as foreman of the jury in the M'Tavish murder case. Fiske has been getting out some very classy literature on brick-work, which for excellence of make-up and typography is hard to beat. It is worth sending for. His new "tapestry" bricks are exceedingly effective.—Crane and Wales have been on a trip together to the Pacific Coast, where each has large construction work under way. While in San Francisco, they were guests of the local chapter of the American Institute of Architects, and, being called upon after dinner, they each addressed the meeting in what they claim were "short, pithy and well-chosen speeches." They are still at large.—Roderick D. Hall writes:

If any of the boys want to inspect the Cambridge subway, I can be found near where the Central Square station is to be, and will be glad to give personally conducted tours, as I am acting as inspector for the Boston Elevated Railway Company.

—Alley has been on a trip to the Mediterranean and other places this spring, including the Azores, Gibraltar, Algiers, Malta, Egypt and the Nile, Palestine, Constantinople, Athens, Naples, Rome and other Italian cities, Paris, London and Ireland. He reports a splendid time, climbed the Pyramids, and brought home many interesting photographs.—Thurber is also in Europe, and had not returned at the time of this report.—Beal's residence is now 307 Davis Street, Evanston, Ill. He is field secretary of the American Peace Society.—Rollins is secretary of the Society for the Protection of the New Hampshire Forests, with offices at Hancock Avenue, Boston.—*Engineering Literature* contains a long review of a text-book on electricity by Hobart, published by D. Van Nostrand Company, of New York. The subject is developed along an entirely new line. The critique states that his treatment throughout shows the hand and mind of a practising engineer rather than that of a teacher.—Commencement Day this year was observed by an automobile excursion to the Country Club by seventeen fellows. Hobbs and Alley had charge of the arrangements, providing the automobiles and supply of dust-removers, which were greatly appreciated, although, as the trip was made in the midst of a driving rain and hail storm, another name for the supplies would have been more appropriate. Al-

though short, this was one of the pleasantest reunions that the class has ever had.—Treasurer Thurber of the Institute has just returned from a three months' trip to Europe, in which he managed to see all there was in Naples, Venice, Rome, the Tyrolese Alps, the Rhine cities, Munich, Nuremberg, London, etc. While fully appreciative of the scenery and surroundings, he also kept a sharp eye on the chocolate industry as practised in the different countries. The Institute funds are said to be still intact.

1890.

GEORGE L. GILMORE, *Sec.*, Lexington, Mass.

Guy C. Emerson, who has been street commissioner for the city of Boston, retired from office June 8. Guy certainly filled the position in a manner to do credit to a Tech man. During his administration a total saving of \$1,865,393.48 was made in the general expenses of the department. When Guy was requested to discharge men who were doing faithful service, he thought it was about time to get out.—Professor and Mrs. E. D. Walker are receiving congratulations on the arrival of a son in their home May 11.—G. T. Voorhees is in London on business.—J. L. Batchelder, Jr., and family are touring the British Isles this summer in their auto.—Andrew W. Woodman, formerly with the Roebling Construction Company of Chicago, has announced the formation of a partnership known as Woodman & Moore, with offices at 184 LaSalle Street, Chicago, in civil, mechanical and electrical engineering.—At the first meeting of the newly organized Engineering Society of North-western Pennsylvania, Professor E. D. Walker, of the engineering department of the Pennsylvania State College, spoke on sanitary engineering. Professor Walker explained what Columbus (Ohio) is accomplishing to build a permanent sewage disposal plant after a systematic inquiry into methods and expense of operation. After the lecture he said that the experience of sewage disposal plants, so far as he could ascertain, has been that the cost of operating the plant has figured not more than 25 cents per inhabitant, and that some plants have gone as low as 15 and 18 cents. The Columbus (Ohio) plant that he mentioned is being watched by City Engineer Briggs as a likely example of what may be done in this city (Erie, Pa.) when the mill creek intercepting sewer system is completed.—Mr. H. P. Spaulding held one of his watercolor and oil exhibitions at the Klackner Club, New York City, April 7-21.—C. C. Babb is now district engineer for the State of Maine Water Storage Commission, with headquarters at Augusta, Me.—We regret to announce the death of Richard H. Kimball at his home in Concord, N.H., on Oct. 7, 1909.—George A. Packard, mining engineer and metallurgist, has undertaken the management of some prop-

erty at Butte, Mont., and for the present his headquarters will be there, although he will still retain his office at 50 Congress Street, Boston, Mass.—Gary Calkins and his bride are still in Europe. They will probably return early this fall.—Fred Harneden's address is Ray, Ariz.—Now that Ned Raymond is with the Pittsburg Plate Glass Company, he has moved his residence to Sewickley, Pa.—In April Charles Hayden was elected a member of the Philadelphia Stock Exchange.—George E. Hale has been elected to succeed the late Alexander Agassiz as foreign secretary of the National Academy at Washington.—Harry Spaulding and family are again at their bungalow at Annisquam for the summer.—At the Economic Club dinner at New Haven in February, in a discussion of the "Conservation of Natural Resources," Calvin W. Rice was the first one called upon to speak, and gave a thoroughly interesting talk on the great work of conservation which is now being done by the government. His speech was divided into three heads, forests, lands and minerals. Rice was guest of honor, and gave an address before the Boston Society of Architects at their dinner at the Parker House April 1. He has been appointed by the Alumni Association as chairman of the Committee of Engineering Research Laboratory.—E. H. Brownell is with the Bureau of Yards and Docks at the Navy Department, Washington, D.C.—E. P. Whitten's address is 16 Woodside Avenue, Jamaica Plain.

That Mars is inhabited and its surface marked by canals of human construction—a popular theory—was disputed at the recent convention of the National Academy of Sciences by Dr. George E. Hale, of Mount Wilson solar observatory.

Dr. Hale rather decried the discoveries of Dr. Percival Lowell, of Harvard University, who established an observatory at Flagstaff, Ariz., and spent several years telescopically exploring Mars, and who declared that canals existed on the planet.

"My observations," said Dr. Hale, "were made last summer under what I consider excellent conditions and with the assistance of a 60-inch telescope. As the photographs show, I found none of the well-defined geometrical lines that other observers have shown, but instead a mass of more or less ill-defined blotches."

"There is a great difference between the results of my observations and those of Dr. Lowell, but there is great similarity between mine and those of Professor Campbell and Professor Barnard, of the Lick Observatory."

OUR TWENTIETH ANNIVERSARY CELEBRATION

In response to the notices sent out in April and May, we met at the Exchange Club the morning of the 6th, and in autos, furnished by Emerson, Gilmore, Hayden, Loring, Mossman and Wason, took the famous Paul Revere route through Cambridge, Arlington and Lexington to Concord, where at the bridge of Revolutionary fame the class photographers took numerous

groups. From here the trip was continued through Carlisle, Chelmsford and Tyngsboro to the Vesper Club on Tyng's Island in the Merrimack River, that was to be our headquarters. We arrived at 2 P.M., and soon the bar committee, Tuttle and Blood, were clearing the dust from our parched throats. After lunch the fun began. A ball game between teams captained by Atwood and Babb lasted through nine innings without killing Mossman, the umpire. Strikes were not called, as every man had to hit the ball, and the ball was six inches in diameter. The final score was 40 to 25. At tennis Delano proved invincible as usual, while at golf Gilmore and Ripley fought it out for eighteen holes, and were even up at the nineteenth. Dinner was served at seven, and later, around the open fire, stories of days gone by were told, and the secretary read the records of the class and the whereabouts of those not present. About eleven we all sought the bungalow, where the bar committee was kept active until midnight, with the click of the pool balls and the shuffleboard for music. Soon after midnight all retired, and the only sound to disturb the rest of the night was the snoring of Loring. After breakfast Thursday morning, all returned to Boston to spend the day visiting the Institute, that many had not seen for twenty years. In the evening, in response to an invitation of our President, Charles Hayden, we met at the Algonquin Club as his guests, and a grand banquet was served while an orchestra quieted our nerves. Thirty-four were seated around the table. After the wants of the inner man had been satisfied, aided by the flowing bowl, Colonel Hayden announced that this reunion was purely informal, and he should like to hear from all. Space here does not permit of giving to the public the many flashes of wit and brain that escaped. It must be reserved until later. But a serious vein ran through it all, and the strength of the good fellowship that existed among us, together with the contentment every man felt with his position in life, was brought out by Ripley, Spaulding, Loring, Whitney, J. K. Noyes, H. L. Noyes, Goodwin, Blood, Robinson, Metcalf, Greenlaw, deLancey, Wason and Hazard. The class necrology showed that twenty members had passed away. Gilmore read a report as chief of staff to Colonel Hayden, chief marshal of the Nantasket parade last year at the grand alumni reunion. About 10.30 our president wound up the festivities of the evening by inviting us all to dine with him five years later, and all accepted with alacrity. The following men were present at the reunion: Atwood, Babb, Blood, A. F. Brown, Burley, Curtis, deLancey, DeWolf, Delano, Emerson, Gilmore, Goodwin, Greenlaw, Hayden, Hazard, Horton, Kendall, Loring, Metcalf, Mossman, Newton, H. L. Noyes, J. K. Noyes, Richmond, Ripley, Robinson, Royce, Sherman, Simpson, Spaulding, Swanton, Tripp, Tuttle, Wason, White, Whitney. All had a glorious time, and it was the sentiment that at our twenty-fifth reunion in 1915 we should make a week of it.

1891.

HOWARD C. FORBES, *Sec.*, 88 Broad Street, Boston, Mass.

The nineteenth annual class dinner since graduation (19—count them—19—and remember the next—) was held at Hotel Thorndike (Lin Damon, '91, proprietor) on Monday, June 6, the day before the Pop Concert. Twenty-four were present,—Alley, Bowen, Boyd, Bradlee, Campbell, Cunningham, Daggett, Damon, Dana, Douglass, Fiske, Forbes, Garrison, Goodwin, F. C. Holmes, G. A. Holmes, Howland, Kimball, Richardson, Trowbridge, Vaillant, Wilder, Wilson, Young. Some of the plans that are under consideration for our twentieth anniversary—1911—were explained by Bradlee, who presided. It was distinctly the feeling of those who were there that several days should be devoted to some kind of an outing; but beyond that everybody showed an entire willingness to rely upon the committee to provide the right kind of an entertainment. There seemed to be a desire to have plenty of it. The committee on 1911 consists of Bradlee, Wilson, Fiske, on General Arrangements; Cunningham, Bowen, Wilder, on Finances; Forbes, Trowbridge, Dart, on Amusements; Alley, Douglass, Bird, on Publicity; Garrison, Aiken, Forbes, on Class Book. In addition to Bradlee's opening speech many brief and pleasing remarks were made by others, both on the responsive plan and on the "butt-in" plan. These included Alley, Garrison, Daggett (who attended for the first time since graduation), Damon, Douglass, Trowbridge, Vaillant and Jere Campbell (very brief). Also there was enough talk by Homer Goodwin to have provided a long speech, if it could have been put together, and concentrated on some underlying idea or on anything else. It is needless to say that the subjects of these remarks were sufficiently varied to give pleasing relief, each from the other, and not to occasion undue mental strain. Some of the class sang, and others, though they looked as if they sang, the general effect was such as to leave us in doubt. The singing was aided by Wilder, who played the piano, and also by Georgie Holmes, who played at it. This dinner was, undoubtedly, the best yet. At the Pop Concert, which came the next night, June 7, the following men were present: Bowen, H. C. Bradley, H. G. Bradlee, Capen, Cormier, Damon, Forbes, Fuller, G. A. Holmes, Punchard and Richardson.—Gorham Dana is president, and George H. Spooner, secretary and treasurer, of the Fire Underwriters' Uniformity Association, with headquarters at 93 Water Street, Boston. Dana writes in regard to this:—

The Fire Underwriters' Uniformity Association, of which I was elected president in May, and George Spooner secretary and treasurer, was founded in 1906 for the purpose of bringing about uniformity in the methods of making reports of various kinds in the fire insurance business.

The active membership comprises the principal insurance boards and bureaux, to the number of 35, through the country.

Dana is also president of the Brookline (Mass.) Technology Association, which was formed in April of this year. Among other things this association is raising funds to provide for a scholarship at the Institute for residents of Brookline, and has already secured about \$190. This is the first scholarship of the kind to be founded for Tech.—Greer made a trip through the country during the spring, coming to New York and Boston, and saw a great many Technology men in relation to real estate investments in Tacoma in which he is interested. He writes as follows:—

A great situation confronts us here in Tacoma. A municipal development unprecedented, rapid, certain, great. Unprecedented,—for such sudden opportunity has never come to any city,—the opening of so many railways all at once; rapid as the combined pressure of these great railway systems can produce; certain as the results obtained by their great careful capital and power are certain; great as our country's commercial development is great, the climax or culmination of our eager pace.

Beyond Tacoma lie the ports of the Pacific; Alaska, with its rapidly unfolding needs; Japan, with its growing commerce; China, becoming alive and building railways to the interior; the Philippines, developing with the modern urge stirring them; Siberia, reaching to us with increasing trade; the mines of South America, sending their ores to our smelters for reduction and we returning lumber from our mills; and to the east of Tacoma the fields and factories of our great, restless United States, pushing their products to this gateway for exchange,—to Tacoma.

Tacoma, with one railway, has doubled the population in about five years.

Five transcontinental railroads have built or are building their lines to, and their terminals for, the Pacific Ocean traffic at Tacoma.

Tacoma, now a city of about 125,000 inhabitants, is already crowding the hills surrounding it.

There is but one pass in the United States through the mountains leading to the Pacific Coast, the Columbia River Gap, through which three of these roads reach Tacoma.

The freight to and from the Orient comes to Tacoma, the meeting point of this the only water-grade rail route and the shortest trans-Pacific line to Japan and China.

The Harriman Lines have spent ten times as much money for terminals at Tacoma as at any other point on Puget Sound, Tacoma being the nearest point on the Sound to the Columbia River Gap. (Terminals more than 150 acres.)

The Chicago, Milwaukee & St. Paul Railroad (William Rockefeller and his allies) have invested in more than ten times the acreage for terminals in Tacoma than in any other point on Puget Sound. (Terminals over 200 acres.)

The simultaneous arrival of four additional trans-continental railroads in a great world port has never before in the history of city building put such concerted pressure into the growth of a city.

—Morris Knowles, who is the chief engineer of the Bureau of Filtration of Pittsburg, Pa., writes as follows:—

Answering the memorandum which you added to the bottom of the notice of the class dinner for June 6, I have gotten together some of the few things which are being considered at Pittsburg at the present time, and trust they may be of some interest. I shall be glad if you think they are worth while to mention to some of the boys in an informal way.

For several years Pittsburg has become more and more active along lines tending for: (a) a lessening of preventable diseases; (b) improvement of general sanitary conditions; (c) general welfare or convenience of the community; (d) beautifying of the city.

Some works along these lines have been carried well on towards completion; others, recognized by the people as both necessary and desirable, have either been started or preliminary steps taken toward getting them under way; still others, while recognized and strongly advocated by city officials, local engineers and broad-minded citizens, who by the nature of their duties, professions or personal interest are awake to all matters tending to advancement or public betterment, have not as yet been so thoroughly discussed as to arouse public interest sufficiently to result in a public demand for their fulfilment, followed by the voting of sufficient money to carry on the work.

In 1905, after several years of agitation, contracts were let for the construction of a filtration system, for the purification of the water supply, in order to accomplish a reduction of typhoid fever in the city of Pittsburg. The contracts covered the construction of a low-service pumping station, sedimentation basins of 120,000,000 gallons, 46 slow sand-covered filters, each of which have a net area of one acre and nominal capacity of 3,000,000 gallons per day, a filtered water reservoir of 50,000,000 gallons capacity, two 72" concrete-jacketed, steel pipe lines across the Allegheny River to the Brilliant Pumping Station, the installation of two 150,000,000 gallon high duty pumping engines in this station and a 50" steel pipe line, five miles long, which crosses the city and the Monongahela River, and supplies what is known as the South Side.

The construction of this work was carried on with such rapidity that the first filtered water was delivered to the city in the winter of 1907-08. In December, 1907, the old city of Allegheny was annexed to Pittsburg, and, in order to provide filtered water for this district, contracts were let in 1908 for ten additional filters, being all that could be built on the remaining land belonging to the city. At the present time all this work, costing over \$8,000,000, including land, has been practically completed. What is the result?

	<i>Year</i>	<i>Total Cases</i>	<i>Total Deaths</i>	<i>Cases per 100,000</i>	<i>Deaths per 100,000</i>
Peninsular Pittsburg, excluding South Side and Allegheny . . .	1907	1751	196	584	65
Peninsular Pittsburg, excluding South Side and Allegheny . . .	1909	326	36	104	11.5

In old Allegheny no filtered water has yet been supplied. Money has been voted by bond issue for a new high-service pumping station and a new 150,000,000 gallon reservoir, and designs and specifications for

these are now being prepared. Even when this work is completed, the whole city will not entirely be supplied with filtered water on account of the failure on the part of the city to reduce the use of water by the installation of meters. More land and more filters will be needed for the Allegheny contingent to provide for the annual rate of increased use.

Money has already been voted, and will soon be available, for the installation of water meters and the extension of large distributing pipe lines to various parts of the city. The water supply question should be investigated as a watershed problem for the entire community. The city may some day be coexistent with the Allegheny County. Plans are already under way to solve this problem as a large metropolitan project. An organization, known as the "Typhoid Fever Commission," has been at work for the past two years making a house-to-house canvass of all cases of typhoid fever and investigating all sources of infection, the causes, and possible methods for still further reducing typhoid fever in this community.

Chiefly through the pressure of the State Board of Health, preliminary studies are being made for the construction of many large trunk sewers and the ultimate connection with a proposed sewage disposal plant. All of this work, if carried out in the next few years, as necessity will demand, will mean the expending of many million dollars.

As is well known by all persons acquainted with the local conditions, Pittsburg is visited sometimes once and sometimes twice a year by such high flood stages on both the Allegheny and Monongahela Rivers that the river banks are overflowed, and low districts along the river banks and even streets in the business section of the city are flooded to such an extent as to make necessary the suspension of business both in mills and in mercantile districts. The money loss due to suspension of business, damage to property, lost time by employees, etc., reaches a very high figure. An organization, known as the "Flood Commission," supported by private contribution, has for over a year had survey parties in the field, and is making a thorough and careful investigation, both of the causes and of the methods of prevention of the floods. Their report will be shortly coming, and will probably be followed by the gathering of available funds to start in the great work of improving the conditions and preventing the large losses due to these floods.

Work along these lines is, for the most part, in its infancy. Money has already been voted to the amount of \$400,000 for the removal of what is known as the "Hump" (a hill in the heart of the city) and the lowering and regrading of streets and filling of low streets in the flood district, which will result in the rapid extension of the business district, accompanied by a natural boom in building construction. There has also been considerable agitation for some years, which will soon take definite shape on account of the growing necessity, for the regulation of street traffic, the extension of trolley systems and for building of tunnels, both for traffic and for street cars, through the hills to the great open country back of the South Side. These projects, if carried out, will require the expenditure of large amounts of money and also the necessity of the employment of a large number of trained engineers.

An organization of rather recent formation, known as the "Pittsburg Civic Commission," is foremost in developing public interest and demand for improvements in civic and industrial conditions which

affect health, convenience, vocation and general welfare of the Pittsburg industrial district, and thus establish such living and working conditions as may set a standard to other American industrial centres. This organization consists of 100 men and fourteen departments. The principal endeavor has been to have prepared a general city plan, for which a preliminary report has already been made. The scope of the work is so all-embracing that it is impossible, in this short synopsis, to go into details, but the result of the labors of this organization will be far-reaching and have a great influence along social, industrial and engineering lines.

In all these works carried out, under way, or proposed, "Tech" men are so numerous, so active and take such a leading part that considerations of modesty and length of article forbid a mention of names.

1892.

W. SPENCER HUTCHINSON, *Sec.*, 1235 Morton St., Mattapan, Mass.

The regular annual meeting of the class of '92 was held in a committee room at Horticultural Hall, Boston, June 7. The following men were present: Curtin, Ingraham, Fuller, Carlson, C. H. Chase, Bigelow, Metcalf and Hutchinson. New officers were elected as follows: president, John A. Curtin; first vice-president, George H. Ingraham; second vice-president, Charles H. Chase; secretary-treasurer, W. Spencer Hutchinson; assistant secretary-treasurer, William A. Johnston. These constitute the executive committee. Plans were discussed for the twenty-year reunion in 1912. It was voted that the president appoint a committee of twenty-five to make plans for the reunion. The executive committee were instructed to provide ways and means for a souvenir class history, to be issued in connection with the twenty-year reunion.—Allen French, instructor in English at Harvard, writes:—

I am at the same old game of trying to teach the Harvard freshmen how to write. In such time as I have to myself I have tried to teach myself writing for what market seemed open. This has kept me from systematic work of my own. I hope in future to get out some more books, taking advantage of the long vacations. I have one planned for this summer, but a novel cannot be written in three months.

For diversion I garden, both at my own place in Concord and at my father-in-law's at Petersham, where I spend the summer. And for true pleasure I watch the development of my three children (girls), discussing with my wife where they got their better or their worse traits.

—W. Spencer Hutchinson left Boston on June 12 for an extended trip in Mexico, where he will examine mining properties. He will spend the month of July at the Vulture Mines, near Wickenburg, Ariz., of which he is consulting engineer. Associated with Angus R. Mackay, '94, he has during the past year designed the equipment for this property. The new mill, when completed this

month, will be the heaviest stamp mill in the United States. The ores are typical gold quartz, occurring in schist, and treatment will be by amalgamation and cyanidation, introducing a unique method of continuous decantation. The value of the ore has already been demonstrated by milling development ores in an old twenty stamp mill from which regular monthly shipments of gold bullion have been made during the past year.—George H. Ingraham, architect, at 2A Park Street, Boston, writes:—

I am still practising architecture, and hope to continue to practise. The most of my important work has been in the city of Detroit, where I built three large residences. I have also done considerable work in connection with the St. Luke's Hospital at New Bedford, Mass. My work has been mainly residence work. At one time I had a branch office in Detroit.

—Leonard Metcalf, of the firm of consulting engineers, Metcalf & Eddy, with offices at 14 Beacon Street, Boston, is serving as a member of the Municipal and Metropolitan Committee of the Boston Chamber of Commerce. He is also secretary of the Committee upon Water and Water Power Diversion of the New England Water Works Association, which has recently issued an important report. Other Tech men on this committee are Charles T. Main ('76) and R. A. Hale ('77). Metcalf has furnished the following interesting account of his engineering activities:—

The greater part of my time during the past six months has been spent, *first*, upon a valuation of the plant of the Pennsylvania Water Company (supplying portions of Pittsburg, Wilkinsburg, and the chain of towns reaching to Wilmerding and Pitcairn) and a determination of a fair rate schedule in conjunction with Mr. Emil Kuichling, a consulting engineer of New York City. The case has been one of considerable interest, in view of the present attitude of the public towards municipal ownership of public service corporations and of extended litigation recently had in regard to the character of the service furnished by the company and reasonable rate therefor.

Second, upon a valuation made in conjunction with Mr. John W. Alvord, a consulting engineer of Chicago, of the property of the Indianapolis Water Company.

As indicating the activities of the firm of Metcalf & Eddy, at the present time, you may be interested in the following facts: My partner, Mr. Harrison P. Eddy, is acting as consulting engineer upon the construction of the sewerage system for the city of Louisville, Ky. He has recently been retained by the city of Milwaukee, in conjunction with George C. Whipple, M. I. T. '89, and Mr. John W. Alvord, of Chicago, to report upon the disposal of the sewage of the city and more particularly the improvement of the Menominee Valley, into which many of the sewers of the city discharge. He is also reporting to East Orange, N.J., upon the possibility of disposing of the sewage of East Orange, Bloomfield, Montclair and Glenridge independently of the proposed trunk line project for taking care of this district.

The firm is also advising the Las Vegas (New Mexico) Water Works in regard to the construction of a dam, and have recently completed plans for the disposal of the sewage and manufacturing wastes of the city of Gloversville, N.Y., after a long series of experiments, extending over a period of over a year, which were carried out under the supervision of the city engineer and Mr. Eddy.

We are now preparing plans for additional sewerage works for the city of Marlboro, Mass., and for several manufacturing establishments on the Neponset River and elsewhere, and Mr. Eddy is serving on a commission appointed by the mayor of the city of Cambridge, to report upon the developments and improvement of the streets of said city.

—Frank C. Shepherd is with the J. G. White Construction Company of New York, and is at present located at Jackson, Ga. He writes as follows:—

I am in receipt of your notice regarding meeting of our class in Boston June 7, and notice to attend Tech Night at the Pops, and wish sadly that I could be with you at this time. However, I am a considerable distance away, here in the middle part of Georgia, and will have to forget the pleasure at this time. I will, however, try to plan for the twentieth anniversary in 1912.

I have been down here nearly two years in connection with the hydro-electric development here. We are building a masonry dam, 100 feet high, 1,800 feet long, to generate 24,000 horse-power, with transmission line to Macon and Atlanta, a distance of over fifty miles each way.

—William R. Kales is vice-president and engineer of the Whitehead & Kales Iron Works, engineers and builders of steel structures. He writes from Detroit:—

I am sorry not to be able to attend the class meeting this year, for I had a fine time last year at our class supper and meeting. There are about seventy Tech men in and about Detroit, but not very many from '92. Walter Newkirk is here, and has been running a machine shop. Horace Lobenstine has a very successful business in the manufacture of leather packings and machinists' gloves. Jim Buckley is with the Morgan & Wright Tire Company.

Our business has been about equally divided between the New York State barge canal and the immediate vicinity of Detroit. For some time my partner and I have been more or less interested in a little stamping and pressed metal business, and last summer the active manager died, making it necessary for us to devote more time and attention to the concern. I now spend about one-third of my time looking after this business, which we operate under the name of the Kales-Haskel Company. A large part of the product goes into the automobiles that are built in Detroit.

During the last year I have been considerably in the public eye, owing to the fact that I have been president of the Detroit Engineering Society and also of the Detroit Public Lighting Commission. Detroit runs a municipal lighting plant, and furnishes current for all street lights and for light and power in all public buildings. The commission consists of six men appointed by the mayor and confirmed by the common coun-

cil, who serve without pay and take charge of the management of the plant.

I hope the '92 men will please note that I live in Detroit. As I lived in Chicago while at Tech, a lot of the boys still associate me with the Windy City, and fail to look me up when here in Detroit.

1893.

FREDERIC HAROLD FAY, Sec., 60 City Hall, Boston, Mass.

John Kerfoot Souther, of Washington, D.C., died Dec. 5, 1909. Souther was connected with both '93 and '94 as a special student, and he had not been heard from for a number of years until a year or two ago. By occupation he was an artist, and he lived at 1854 Mintwood Place, Washington, D.C. In 1902 he married Miss May Langhorne Taylor, who with a daughter and two sons, survives him.—The seventeenth annual dinner of the class at the Corinthian Yacht Club at Marblehead Neck, June 8, will live in the memory of those present as one of the best of the many memorable events in '93's history. The success of the affair was due in great measure to our hospitable host and class president, Henry A. Morss, ex-commodore of the club, through whose good offices the club-house was ours for the night. The weather, which had been exceedingly disagreeable through the early part of June, favored us with a perfect afternoon when the class assembled at the North Station in Boston to take the 5.05 o'clock train for Marblehead. With much appreciation of Morss's ability as a navigator, the party was skilfully piloted through the crooked streets of old Marblehead to the ferry landing, where we embarked for the Corinthian Yacht Club on the opposite shore of the harbor. Immediately on our arrival at the club, quarters were assigned to those who desired to remain over night, after which most of the party spent the time until sunset on the piazza overlooking the beautiful harbor and the Beverly shore. At sunset, dinner was served, with President Morss at the head of the table. Speeches were barred, but good fellowship abounded, and this proved to be another occasion when acquaintanceship and ties of friendship were strengthened between those who were fortunate enough to be present. About ten o'clock half of the party left for Boston, but the others, to the number of ten, remained at the club over night. On the following morning the first *al fresco* breakfast of the season was served on the piazza. The outlook was quite as charming as it had been the evening before, and this event added immensely to the enjoyment of the outing. After giving the class cheer for the steward, who had taken especial pains to see that everything was done for the comfort of the party, the return trip to Boston was negotiated without difficulty or any unusual experience. A business meet-

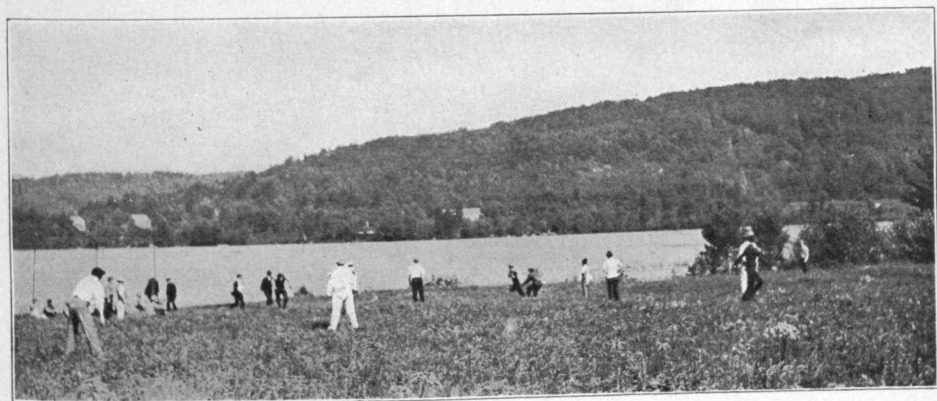
ing was held at the close of the dinner. The reading of minutes of meetings and of reports were dispensed with, and the following officers were elected: George B. Glidden, president; Edward B. Carney, first vice-president; Edward D. Densmore, second vice-president; Frederic H. Fay, secretary-treasurer; Frederic H. Keyes, assistant secretary. It was voted unanimously that the election of secretary should be "for life," the other officers being elected for one year. The members present were: F. B. Abbott, R. H. Beattie, A. F. Bemis, S. A. Breed, E. B. Carney, W. W. Crosby, H. N. Dawes, E. D. Densmore, F. N. Dillon, F. H. Fay, W. S. Forbes, G. B. Glidden, F. H. Keyes, H. A. Morss, E. S. Page, W. B. Page, A. S. Pevear, C. W. Taintor and J. F. Tomfohrde.—At the annual meeting of the National Association of Cotton Manufacturers, held in Boston, April 28, A. F. Bemis was elected a director for a three-year term, F. W. Hobbs, '89, was elected president of the association and George Otis Draper, '87, one of the vice-presidents, thus giving Tech a good representation among the officers of that association. Bemis and Hobbs are respectively president and vice-president of the Alumni Association.—Edward M. Hagar, of Chicago, and Mrs. Hagar sailed for Europe late in June, and will spend several weeks motoring in Great Britain and Ireland, after which they will send their car back, and spend a short time on the Continent before sailing for home early in September.—Albert L. Kendall, until recently first lieutenant of the Second Company of the Coast Artillery Corps, Massachusetts National Guard, has been honored by Colonel W. E. Lombard with the appointment as artillery engineer on his staff, with rank of captain.—Henry A. Morss, ex-commodore of the Corinthian Yacht Club, sold last year his schooner "Dervish," which for three seasons was flagship of the club. This year he purchased, and is sailing, the schooner "Vision," built by Lawley at South Boston in 1905. The "Vision" is a smaller boat than the "Dervish," and her principal dimensions are 64 feet 5 inches over all, 43 feet water line, 14 feet 4 inches beam and 4 feet 3 inches draft.—Percy H. Thomas, of New York, was elected a vice-president of the American Institute of Electrical Engineers at the annual meeting held in New York on May 17. At that meeting Professor D. C. Jackson, of the M. I. T., was elected president of the society.—Dr. Augustus B. Wadsworth, of 180 West 59th Street, New York city, has been spending some time this spring in London, and is expected to return to New York in July.—The following changes of address have recently been reported: Orton W. Albee, 1218 Penobscot Building, Detroit, Mich.—George S. Barrows, with engineering department, the United Gas Improvement Company, Broad and Arch Streets, Philadelphia, Pa.—Charles E. Belcher, care Standard Publishing Company, 93 Broad Street, Boston, Mass.—Richard E. Belden, (business address) 30 Broad Street,

(residence) 4 Berkeley Place, New London, Conn.—John R. Brittain, machine designer with the Los Angeles Railway Company, 32½ South Hill Street, Los Angeles, Cal.—S. H. Brockunier, general manager, Erie Consolidated Mines Company, Graniteville, Cal. (home address, as before, Wheeling, W. Va.).—Walter V. Brown, 158 Stuyvesant Place, New Brighton, Staten Island, N.Y.—Robert S. Burbank, with Great Western Power Company, Camp 7, Oroville, Cal.—George K. Dearborn, care Barrett Manufacturing Company, Elizabeth, N.J.—Charles H. Deitering, 1320 Missouri Trust Building, St. Louis, Mo.—Laurence B. Dixon, orange grower, Victoria Avenue and Madison Avenue, Riverside, Cal.—Theodore T. Dorman, Upper Montclair, N.J.—E. J. Fairfield, 1311 Machesney Building, Pittsburg, Pa.—Charles E. Fox, architect, 919 First National Bank Building, Chicago, Ill.—Clarence D. Gilchrist, chief inspector bridges and buildings, Logansport Division, Pennsylvania Lines West of Pittsburg at Logansport, Ind. (home address, Arlington, Vt.).—William H. Graves, ceramist, with Waldo Brothers, 102 Milk Street, Boston, Mass.—William F. Hunt, 409 North Street, Weymouth Heights, Mass.—George Moore, care Empire District Electric Company, Joplin, Mo.—Archibald Murray, with Canadian Northern Railway Company, 663 Richmond Street, West, Toronto, Ontario.—Alden R. Palmer, The Alhambra, Muskegon, Mich.—Frank F. Phinney, president and treasurer, Warren Steam Pump Company, Warren, Mass.—Howard R. Sargent, managing engineer of the wiring supplies department of the General Electric Company, (home address) 106 Avon Road, Schenectady, N.Y.—F. F. Skinner, 315 West 70th Street, New York city.—A. Blakeley Smith, care A. W. Smith Company, 49 Federal Street, Boston, Mass.—Rev. George Benton Smith, Darien, Conn.—Frederick C. Sutter, 965 Cass Avenue, Detroit, Mich.—Charles A. Tripp, 710 Majestic Building, Indianapolis, Ind.—S. P. Waldron, Maplewood, N.J.—Amasa Walker, 449 Fourth Avenue, New York city.—Frederic I. Warren, Bay City, Mich.—Harry E. Weeks, architect, 825 Cuyahoga Building, Cleveland, Ohio.—J. E. Woodbridge, 85 Second Street, San Francisco, Cal.—Arthur Farwell, class of '93, is in New York, where he occupies a position on the editorial staff of the weekly paper *Musical America*. He is also associated with the New York Symphony Orchestra, Walter Damrosch, conductor, as writer of the program notes for the Symphony Society Bulletin. Beyond this, he is engaged in the development of the American Music Society, of which he is the founder and the national president, and which now has centres in some fifteen cities from New York to San Francisco.

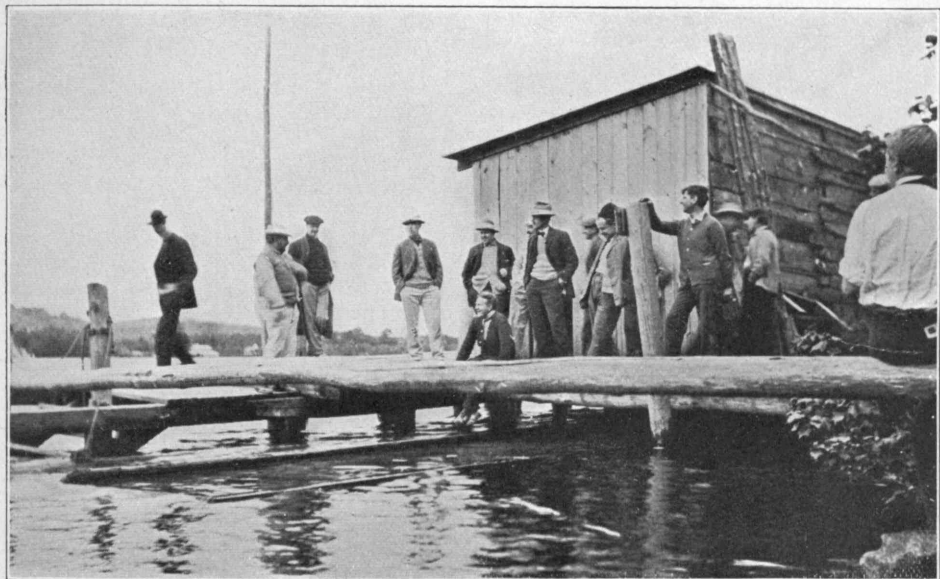
1894.

PROF. S. C. PRESCOTT, *Sec.*, Mass. Inst. of Tech., Boston, Mass.

George Anderson has changed his position during the past year, and is now with the Baldwin Locomotive Works at Eddystone, Pa., after several years with the Maryland Steel Company.—Coolidge has become associated with the Pacific Telephone and Telegraph Company, with an office in the Shreve Building at San Francisco.—Frank Drake's present address is 1845 Commercial National Bank Building, Chicago.—Ferguson has completed his portion of the work on the Charles River Basin, and is now engineer for the Massachusetts Harbor and Land Commission, with an office at 131 State House.—Horatio Parker sends 2426 St. Paul Street, Baltimore, as his present address. He has been located in a great number and variety of places in connection with work for the Geological Survey, and will now probably find it possible to visit his old haunts about Boston occasionally.—Wade is living at Chico, Cal., his address being 59 Rio Chico Way.—The members of the class will regret to learn of the death of Souther on Dec. 5, 1909. He was a member of the class during the freshman year.—Bob Loring sends 33 McGregor Street, Montreal, as his present address.—T. I. Chapman, who was associated with both '93, and '94 is now living in Concord, Mass.—Miss Elvira Wood, after distinguished service as a palæontologist at Washington and New York, has returned to her old home at Waltham. She was formerly expert for the Geological Department at Washington.—The secretary is happy to announce to the class and others his marriage to Miss Alice D. Chase, Wellesley, '06, and a daughter of John C. Chase, '74. The wedding took place in the Houghton Memorial Chapel, the college chapel at Wellesley, at half-past two on Thursday, June 30. The affair was distinctly a Tech-Wellesley one, as the best man and ushers were Tech men, and the matron of honor and bridesmaids were all Wellesley graduates. Mr. S. K. Humphrey, '98, was best man, and the ushers were Messrs. S. M. Gunn, '05, R. D. Bradbury, '06, J. S. MacNutt, '08, and H. E. Weeks, '08, all former students in the Department of Biology.—Haven has been made Associate Professor of Mechanical Engineering at the Institute.—Twelve members of the class were present at the alumni spread and Pop Concert. Frank Green came over from New York. Jack Jones, who has not attended any class function for years, was a welcome addition to the group.



SCENES AT THE FIFTEENTH ANNIVERSARY, CLASS OF '95



SCENES AT THE FIFTEENTH ANNIVERSARY, CLASS OF '95

1895.

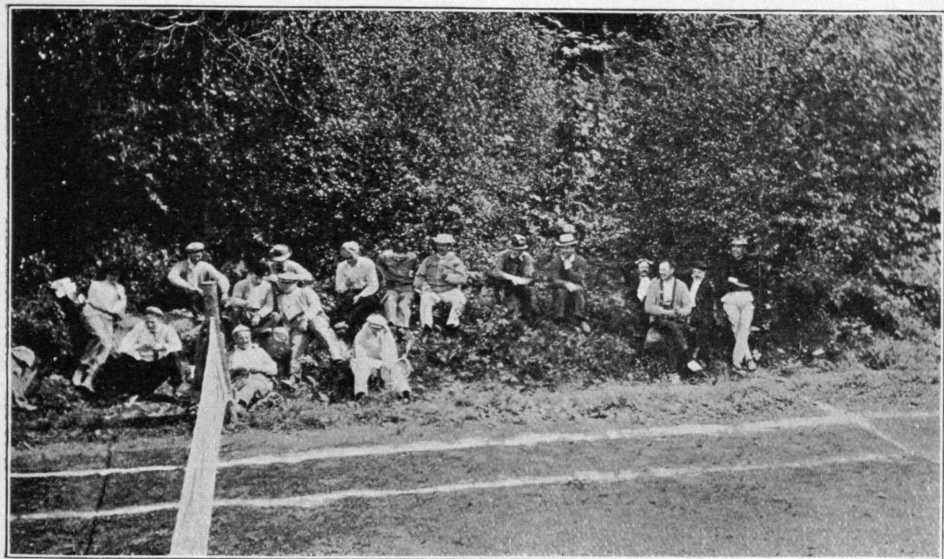
GEORGE A. ROCKWELL, *Sec.*, 101 Tremont Street, Boston, Mass.

On the one o'clock train Saturday, June 4, thirty-two members of the class of '95 started to celebrate the fifteenth anniversary of their graduation. Men came from New York city, Albany, Poughkeepsie and Springfield, as well as Boston. It was remarkable to see the good friends of fifteen years ago try to place each other, for some had grown fat and some had grown thin, some taller, some shorter, while the bald heads and gray heads were in abundance. The special train which took us to Ashland, N.H., gave a grand opportunity to do a lot of getting up to date. By the time we left the train for the automobile ride to Little Asquam Lake, we had lost all the dignity that Tech or business had impressed upon us. A steam launch took us three miles up the lake to Dr. Schubmehl's camp, Sherwood Forest, where a fine dinner awaited us, prepared by the chef we sent up the day before. The camp is situated on a hill several hundred feet above the level of the lake. Each man carried up as much baggage as he could, and all arrived at the top of the hill in various stages of exhaustion. Each one appropriated what seemed to him to be the most comfortable mattress, and immediately proceeded to put on his uniform, although uniform is a misnomer, because the uniforms were anything but uniform, but all were comfortable and more or less becoming. The dinner in the large dining camp easily put to rout the shades of the class of 1885. Our genial president, Newell, called a class meeting after dinner, and his easy presiding made it most enjoyable. The recreation hall was lighted by a big fire in the fireplace, which added greatly to the pleasure of the occasion. The president stood before the fire as long as he could stand it, and then withdrew into the darkness, but occasionally emerged to preserve order by physical violence. Gene Clapp had fifty or more letters from classmates who could not come, and whose absence was much regretted. All were much interested in hearing what each of the others had done in the past fifteen years. Each man was allowed a few minutes to put the others in touch with his varied successes. All went to bed at an early hour, although it must be said in the case of some it was early the next morning. All managed to stick to their beds until daybreak, in spite of the snoring chorus and the slightly chilly air. The next morning we had two ball games. The first with the "indoor baseball," and the second with a tennis ball. Swift gave up keeping account of the errors after the first few minutes. Some of the most remarkable rules were discovered. The favorite way of putting a man out was by "soaking" him with the ball. After the ball game the launch took several of

the crowd up to Big Asquam Lake for an enjoyable sail. All the names were put into a hat after dinner, and partners as drawn played in the tennis tournament. It was a most wonderful exhibition, won by Rockwell and Miller, and largely due to Miller's work on the side lines. Aside from the tennis the view from the courts, which are back of and above the camp, was well worth our climb. The hornpout trip Sunday evening was a great success, it being decided to prolong it several hours more than at first planned. Wheeler won the pool for the largest fish. The glee club rehearsed in the early evening, and had a warm welcome for the tired, cold, and wet fishermen. Dr. Schubmehl's sleight-of-hand was greatly appreciated, and rounded out a most pleasant evening. Monday morning was devoted to bowling in the recreation hall, the indoor baseball being used as a bowling ball, and empty beer bottles serving as pins. In the afternoon more tennis was played, and the evening was devoted to cards and so-called singing. On Tuesday morning a launch took the fellows around Asquam Lake, and about noon we started home in a special car. The forethought of the brewing expert, Dr. Defren, in bringing beer quietly down from camp to wash down our sandwiches, was much appreciated. The trip ended at the Pop Concert Tuesday evening. Tucker was obliged to return Sunday night. He was well cheered on leaving, and was much missed. Lookout Mountain across the lake was so tempting that the energetic climber, F. A. Bourne, took the trip twice, once leading a party. They had a magnificent view of Big Squam. Monday morning Sid. Clapp woke up the exclusive club to get his early breakfast before starting back to Poughkeepsie. Great excitement was shown over the proposed sparring contest between "Pal Moore" and Loring, and much disappointment was expressed on finding Loring over weight. Professor Barrows at all times lent dignity and Faculty approval to all "diddings." The air at the camp was most invigorating, F. L. Richards was said to have been seen running—down hill. There were no cliques. Nearly every one mixed well, especially Laurie Hurd. The one exception, however, was the exclusiveness of Nichols and Taft in their club, but this was excused for cause. George Shepard was elected and enthroned on the gasoline barrel, although it was rather wet. Then the walking on the water stunt, the falling out of the bungalow, and the slide under the mattress, but the less said, etc. The class treasury was empty when we went up. It was up to Mr. Treasurer George Rockwell. They said, "Let George do it." He did, and us also. Frank Miller had to pay the treasurer twenty-five cents to announce that it was clear in Boston. George seemed to be fond of the feline family, for he had a "kitty" everywhere. A sweater was offered to be raffled for the benefit of the treasury. Great credit is due to Miller, Canfield and Gene Clapp for the successful and clever way this was handled. R. J. Williams, the



SCENES AT THE FIFTEENTH ANNIVERSARY, CLASS OF '95



SCENES AT THE FIFTEENTH ANNIVERSARY, CLASS OF '95

winner, in a noble and generous spirit donated it for another raffle, and, when Arthur Canfield won it, the crowd, as one man, voted that he donate it to the class of '85, and he did. We hope to hear that they had as much fun with it as we did. Frank Miller's success as manager of the sporting department was marred by not having provided for the rainy Monday morning, but he was forgiven. Gene Clapp is certainly the "King of Eats." The plentiful way we were served made our bills seem small. Charlie Parker's pickerel is being preserved—in Squam Lake. Badger and Walworth proved to be connoisseurs. They knew the rich nutty flavor. The genial smile would not come off Faxon, even if he had a loose valve. Although S. P. Hunt deserted Manchester for the trip, it is pleasing to learn that the trolleys ran and the lights did not go out. The class of '95 was honored by the presence of Mr. "Geo. Gould" Winkley, of Newport and Bar Harbor. We were glad to see that Powers had fully recovered from an operation, which, according to George Shepard, was the first of its kind ever performed. Andy Fuller wanted so much to be the big noise himself that he insisted on stopping the music of the boiler. George Cutter was so pleased with his success as banker that he intends to go into the banking business permanently. J. W. Cooke told several men that the trip did him a lot of good. In fact, he felt that he was practically a new man in every way. Gus Clapp blushing accepted the first prize for his slack wire performance. Masters brought the good wishes of his ten days' old baby, who could not be present in person on account of business in New York. We all had a bully time. Let all the other classes go and do likewise.

1896.

CHARLES E. LOCKE, *Sec.*, Mass. Inst. of Tech., Boston, Mass.

While waiting for a train in Chicago, the secretary made a call on Joe Harrington, and found him the same old Joe of fourteen years ago,—the same smile, the same whiskers and the same high figure. The years had added considerable flesh to his frame. During the call, Joe related the history of his past life, which for two years after graduation was located in Mexico, where he was engaged in surveying, prospecting and mining,—an example of a versatile Course II. man doing the work of Courses I. and III. From Mexico he came to Chicago, and entered the employ of the Green Engineering Company, under Poppenhausen. This company makes a specialty of an automatic stoker which involves considerable engineering work, since each installation is specially designed. Joe's work has been along the engineering end, covering the design, manufacture and installation. Lack of time pre-

vented a run out to Joe's new house, to view his family and his garden. It appeared to be a question in which he took the greater pride.—In San Francisco a half-day was spent with Hyde, looking over the beautiful University of California at Berkeley and meeting Charlie's growing family. Charlie says that the last REVIEW told all about Hyde, and he made all kinds of threats if more appeared in this number, hence silence.—From Frederick E. Field came a message: "5-14-10, 4 P.M. The stork has been at our house, and left a little girl, Margaret Louise." Bully for the sanitary engineers.—Mr. Armin F. Lindenlaub is now making a trip on this side of the water, the first since he returned to Germany in 1895. Lindenlaub's home address is Arnstadt in Thuringia, Germany. He has been interested in manufacturing, and for a number of years has been connected with a factory which turns out machines for making cigarettes. This factory is located at Baden Baden. Recently he has also associated himself with Richter, the well-known German instrument maker of Chemnitz in Saxony, and his present trip to the United States, which will be of several months' duration, is for the purpose of investigating the field for these drawing instruments in America.—Mr. J. H. Haste writes from Rochester, N.Y., as follows:—

We have been so busy for the last few years that I have had little time for anything but work, with now and again an opportunity to take short automobile trips. Rochester is, as perhaps you know, splendidly located in this respect. There are any number of interesting trips that can be reached in a few hours with an automobile, the most popular trips being to Niagara Falls, Watkins Glen, and the several small lakes roundabout; i.e., Cayuga, Seneca, Keuka, Hemlock, etc. With the exception of about six miles the roads between here and Buffalo are in splendid condition. I am expecting that perhaps this summer I shall be able to take an automobile trip on to Boston and perhaps the White Mountains.

I expect you heard that some weeks ago we had an opportunity to meet Dr. Maclaurin. He stopped off in Rochester for a few hours on his way from Syracuse to Buffalo. There were some score or more of us who arranged a dinner, and he gave us a very interesting talk. Needless to say, we were all very well impressed with both Dr. and Mrs. Maclaurin.

—The Santa Fé *New Mexican*, March 11, records the death of James Wallace Raynolds, superintendent of the Territorial Penitentiary. Mr. Raynolds, who was but thirty-seven years of age, had suffered from a nervous breakdown, which resulted in complications which caused his sudden death. He leaves a widow, who before her marriage was Miss Baum, of Omaha, and four children, three sons and one daughter. Leaving the Institute, Wallace returned to his home in New Mexico, and was appointed assistant secretary of the Territory. Later he entered his father's bank, and on the death of the secretary in 1901 was appointed to fill out the term by President Roosevelt. He was appointed for two succeeding terms, and for three months of the time was acting governor in

New Mexico. Governor Curry offered him the position of superintendent of the Territorial Penitentiary in 1909.—Charles Morris, Jr., Paymaster United States Navy, is now located at the Charlestown Navy Yard.

1898.

E. F. Russ, *Sec.*, 70 High Street, Boston, Mass.

The class of '98 had their annual dinner and meeting at the Boston City Club June 7. The meeting, which was a short informal one, came to order at 5.30. Winslow, who has been such an efficient secretary since graduation, felt called upon to resign, as he is to make New York City his home, becoming professor of biology at College of City of New York. His place is taken by the Vice-Secretary Russ, according to our constitution. Godfrey was appointed to take Winslow's place on the Advisory Board. Coombs was elected vice-secretary, and the committee on informal meetings is to consist the following year of Coburn, Godfrey, Coombs and Russ. It is intended that regular dinners be held monthly at the City Club. These meetings have been very successful the past year, sometimes as many as thirty men in the vicinity of Boston turning out. Next year it is proposed that members further removed from Boston be notified of the times of meeting, and it is sincerely hoped that these non-resident members will take advantage of the proposed dates, and plan any trips to Boston on days coinciding. There were twelve men present at this last meeting of the season. All enjoyed a very excellent dinner, and later adjourned to the "Pops" for Tech Night. There they were joined by others of the class. The pleasant feature of the whole affair was the presentation to Winslow of a loving cup, as an expression of the deep appreciation for his services and a tribute to his loyalty, work and devotion to our class. This was given by the men around Boston.—Babson conducted a very interesting discussion on the projected scheme of establishing a course in finances and economics based on the lines of old Course IX.—E. M. Milliken received an A.M. in Education at Columbia University and a Master's diploma in Physical Service.—R. F. Bennet is treasurer of Bennet Contracting Corporation formed in December of last year at Portland, Me.—Frank E. Coombs, the new secretary, has changed his business address to 201 Devonshire Street, Boston, Mass. In this connection it might be well to say that, if anything of business or family importance happens to any man of '98, advice of same should be forwarded to Coombs or E. F. Russ, 70 High Street, Boston. By this means we can keep in touch with each other through the columns of this REVIEW.—Mention was made above of the fact that R. E. Babson was working to have the Institute

operate a new course. He is extremely anxious that the plan should have the hearty support of every '98 man. Babson's specialty is statistics on business corporations, and his reports are to be found in financial houses of standing all over this country.—Dr. H. W. Jones' address is now 1515 Park Road, Washington, D.C. He reports that he has been on duty in that city since June, 1909, but never too busy to see any '98 man who will look him up.—Charles S. Hurter, Box 692, Wilmington, Del., is making a detailed study of blasting methods and use of explosives in the Lake Superior iron mining district.—Shirley S. Philbrick can now be reached at Charleston, Wash.—Robert Lacey, 7 Mann Building, Utica, N.Y., is an engineer for contractors on New York Barge Canal. He thoroughly believes that, as far as construction is concerned, the contractors' side is more difficult and interesting than the engineers'.—Clarence Goldsmith is consulting hydraulic engineer for the National Board of Fire Underwriters of New York. At the present time he is in San Francisco, Cal.—Clifton W. Wilder was on April 1 this year appointed electrical engineer, Public Service Commission, first district, State of New York. Previous to this appointment he was acting engineer for about a year.—Ernest A. Bragg has a daughter Doris Evelyn, born Dec. 15, 1909. He has been ill since the first of the year, and is taking a vacation until fall.—Alvan L. Davis gives the interesting information that, since Pittsburg's filtration plant was installed under the direction of M. I. T. men, the death-rate has been cut down 10 per cent. as regards typhoid.—E. Warner Ritchie reports his address for the next two years will be care of Purdy Engineering Company, Chomec, Costa Rica.—L. D. Gardner has been appointed general manager of the Blaugas Company of America, with offices at 100 Broadway, New York city. Blau-gas is a new liquefied bottled gas which, while new to this country, has, nevertheless, been used successfully in Europe for several years. Mr. E. C. Benedict, of New York, is president of the company which is engaged in manufacturing a portable compressed gas for house and other lighting.

1899.

HERVEY JUDSON SKINNER, *Sec.*, 93 Broad Street, Boston, Mass.

Mr. Edwin Sutermeister, formerly expert in the Forest Service in the United States Government, is now on the staff of the United States Forest Laboratory established by the government at the University of Wisconsin. He is in charge of the Wood Pulp Laboratory.

1900.

INGERSOLL BOWDITCH.
GEORGE C. GIBBS.RICHARD WASTCOAT.
PERCY R. ZIEGLER.N. J. NEALL, *Sec.*, 12 Pearl Street, Boston, Mass.

On the evening of April 27 eighteen of the boys gathered at the Technology Club for dinner and to hear C. A. Richardson relate some of his experiences while on railroad construction in the north-west. Richardson had a number of lantern slides, which he used to illustrate his talk. Lawley, Walworth, Bowditch, Richardson, Emery, Leary, Burnham, Wentworth, Burns, Ashley, Hunt, Howe, Brown, Neall, Bugbee, Reardon, Graff, Cutting and L. C. Smith were present.—Frank Warren (II.) announces the birth of a daughter this spring. Congratulations to Frank.—Southworth (IV.) was calling on friends around town over Memorial Day while on a trip from Washington to Chelsea in reference to his work. He is with the Bureau of Yards and Docks, and has charge of the plans for hospitals which are constructed by the navy in various parts of the country. Southworth is not married, but, even so, he is looking fine and in the best of condition.—Fred Cook is now stationed at Washington, and has one of the best berths in the the civil engineer corps, and is directly under the admiral who has charge of the Bureau.—Ziegler reports that he is doing a land office business with his patented dirtless milk-pail. Later he expects to patent one which will not hold water.—The invitations are out for the wedding of Lawrence S. Smith to Caroline Sutton Vail on June 15 at the Friends' Meeting-house, Baltimore.—Batcheller announces the birth of another boy, Edgar Hadley, born in Mattapoisett, Mass., May 2. Batcheller expects to go west again about the 15th of the month.—Arthur White out in Los Angeles sends on a picture of his two bouncing boys, the younger about nine months, both true California youngsters, living outdoors and growing up in the air and sunshine.—The annual Pop Concert brought a few of the "Old Guard"; namely, Reardon, Graff, Stearns, Cutting, Batcheller, Wastcoat and Lincoln.—Lincoln is on from Butte, Mont., for a short visit, and expects to examine a number of prospects this summer before resuming school work in the fall.—Graff ran across Collier down in Charlotte, N.C., while both were attending a barbecue held in connection with the recent convention this spring of the American Institute of Electrical Engineers.—Ten years out of college is productive of many changes in the ideas and positions of the men of the class, and a study of the present positions of the men develops many interesting facts. The following data are only in regard to men receiving their degrees in 1900. We graduated in 1900 one hundred and eighty-five, and since then have lost

eight by death. Three of the six young ladies who received their degrees at the same time are married. Taking the courses by themselves, we find that of the civils the Water Board of New York City has the largest call, and employs three of our members, Searle, Stone and Suter, while Charles believes in the Charles River Basin and Reimer in the water-works of East Orange, N.J. Of the railroad men the New York Central claims Jewett and Tudbury; the Boston & Albany, Briggs and Whitney; the Boston Elevated, Stearns and Richardson; while Smith is on the Missouri Pacific; Oxnard, the Bangor & Aroostook; and Brooks is in Canada on the Canadian Pacific. Leonard is in the contracting business for himself, and White, consulting work, while Abeel, Harps and Tuck are all in New York City with different concerns in the same lines. Hinman, Seaver and Vogel are all with manufacturing companies. Bowditch and Wastcoat are in business, and Gibbs is studying for the ministry. Russell is the only pedagogue, Cooke and Thurber hold commissions in the civil engineering corps, while Wedlock and Larabee are draughtsmen in the Navy Department.—The Course II. men are much more scattered than the civils. Allen, S. P. Brown, Buffum, Horton, Manley, Osgood, H. E. Pitcher, Suhr and Sullivan are all mechanical engineers for various companies, the majority being manufacturers. Warren is the only one in consulting work for himself, while Gardner, Goodridge, Maxfield and Lingley are with contracting or engineering companies. Burnham, Keay, Paul and L. S. Smith are teaching. Chase, Edison, Frink, Hough, Schneller, Sperry and Walworth are either officials or managers of companies, mostly manufacturers. Ziegler is in business, selling dairy machinery; Brooks, a railway editor; Perry, a business manager for a board of education; Hodsdon, a draughtsman; and Osgood (I.), an insurance inspector.—The miners are certainly making good with Elbert, Leach, Roberts, Snow, Stevens and Tweedy connected with mining companies in various capacities, while Hamilton, Plummer and Johnson are mining engineers, Bugbee and Lincoln are teaching, Badlam and Campbell are with steel companies, Dovey with a glass company and Emery with a gas company, Root is a treasurer and Batcheller is in business.—Of the architects, Chaffee, Clausen, Rapp and Walker are in business for themselves, while Clow, Ford, Lawrence, Merrick, Pigeon, Price and Rand have positions with architects or engineers, and Kattelle, Southworth and Stratton have government positions. Hopeman and Sherman are in the contracting business, while Beekman is manager for a contracting company.—Course V. has Balcom and Knight with the Department of Agriculture, Adams and Miss Durgin in state work. McCrudden, Melcher and Miss Wilson are teaching. Baldwin, Cayvan, Holbrook and Thayer are superintendents of chemical, biscuit, refining and soap companies, respectively. French, Kingman and

Ripley are chemists with companies, Ellis and Lewis are interested in chemical companies and Brown is director of a research laboratory.—Of the electrical engineers, Barton and Neall are in consulting work on their own account, Barker, Fulton and Keith are engineering with different concerns, while Blair is a patent lawyer. Brown is engineer for a telephone company, Herbert, F. N. Conant, Gallagher, Hopkins and Morgan are engineers with various manufacturing companies, Penaud with a lighting, Shumaker with a telegraph, Collier and Silverman, street railways, Hall and Littlefield have turned salesmen for electrical machinery, Mott-Smith is the only teacher, J. B. Conant is in business for himself, Dean is a chief draughtsman in the navy and Hapgood is in the shoe business.—Course VII. has H. B. Conant in the ministry, while M. W. Hall uses a different method, and is a doctor, and Kendall is teaching in the Harvard Medical School.—Course VIII. has Brock in the ministry and Miss Langford teaching.—Of the Course IX. fellows, Davis and Weeks are teaching, Draper is a lawyer, Gauss a mining engineer and Howe is in business.—Course X. has Ashley developed into a ceramic chemist in the government service. Burroughs, Dutton, Johnson, Mead, Merrill and True are with chemical, steel, powder, paper, cement and watch manufacturing companies, respectively. Fitch is an accountant, and Patch is teaching.—Course XI. has Heghinian as an asphalt expert, while Porter and Witherell are with water and health departments.—Of the Course XIII. fellows, Barney and Hussey are naval architects, Moody and Simpson are draughtsmen with shipbuilding concerns. Briggs is with a foundry, Macpherson is with a telephone company, Wyman is in the Patent Office and Hunt is teaching. To sum this matter up, the following will show in a general way what the members of the class are doing: 23 are consulting or with consulting engineers, 10 are with contracting concerns, while 11 are with railroads and 7 on water supplies. 17 are found with the government or on public service work, 43 with manufacturing companies and 8 are mining engineers. 17 are teaching, while 3 are ministers and 2 are lawyers. The rest are in various kinds of occupations.—Mr. Robert H. Clary writes, June 4, that he is sailing from San Francisco to examine mining concession in the Philippine Islands. He expects to be gone about three months.

1901.

ROBERT L. WILLIAMS, *Sec.*, 19 Pleasant Street, Cambridge, Mass.

The annual business meeting of the class was held Tuesday, June 7, and the following officers were elected: President, F. W. Freeman; Vice-President, E. F. Brigham; Secretary-Treasurer, R. L. Williams; executive committee, N. L. Skene, R. S. Little-

field; Assistant Secretary, R. H. Stearns.—Charles F. F. Campbell, superintendent of the industrial department of the Massachusetts Commission for the Blind, left Boston June 1 to become the director of the work which the Pittsburg Association for the Blind is to carry on in Pennsylvania. The following resolution was adopted by the Massachusetts Commission for the Blind:—

“That, appreciating the limitations of the Commission’s resources and the larger field offered in western Pennsylvania, Mr. Campbell’s resignation be accepted with extreme regret and in high appreciation of the invaluable service given by both Mr. and Mrs. Campbell to the work of the Commission.”

“We recognize that in the initiation of this work for the blind in Massachusetts, in the stimulating of public interest and in the bringing about of co-operation among the various forces concerned, their enthusiasm and self-forgetting energy have been of the greatest value.”

—C. W. Danforth is first assistant chemist in the Gary Laboratory of the Indiana Steel Company. He has the oversight of forty chemists and helpers. In his line of work he has written an article on “Preliminary Tests from the Open Hearth Steel Furnace.”—T. H. Taft is an instructor in mechanical engineering at Technology. He has given a course of lectures on automobile engines at the Salem Young Men’s Christian Association.—Stanley C. Sears finds himself busy as superintendent of the Descubridora Mining and Smelting Company and also of the Durango Central Railroad.—Waldo G. Wildes, as resident engineer New York State Barge Canal, is in charge of the construction of the Delta Reservoir for the Barge Canal Water Supply—Charles I. Auer is located at Estacion Pedricena, Durango, Mex., and is a custom assayer and chemist.—William I. Sturtevant, manager of the Everett Light and Water Company, of Everett, Wash., has recently been appointed manager of the Seattle and Everett Traction Company in addition to his other duties. The Traction Company operates high speed interurban electric railway between Everett and Seattle.—Miss Grace V. MacLeod, formerly instructor in physics at the Technical High School, Springfield, Mass., is to become instructor in physics and chemistry in the School of Household Science and Arts at the Pratt Institute, Brooklyn N.Y.—George P. Shute has been appointed superintendent of the Garbage Collection Department of Columbus, Ohio. Mr. Shute is a member of the firm of Bradbury & Shute, practising civil and sanitary engineering in Columbus.—The publication *Motor Boating* recently contained an article on Norman L. Skene, who is a practising naval architect at 14 Kilby Street, Boston. Among the best known of his motor craft are “Ariadne,” “Javelin,” “Mahdeen,” “Waubesa,” “Nootka” and “Blackhawk.”—Wilford W. DeBerard has recently joined the staff of the *Engineering Record* as western editor, with headquarters at Chicago.

1902.

F. H. HUNTER, *Sec.*, 75 Park Street, West Roxbury, Mass.

The annual meeting of the class was held at a supper at the Hotel Oxford on Tuesday, June 7. Formal reports were waived, and the officers whose terms expired were re-elected for another year. The announcement, by the president, of the engagement of the secretary was received with enthusiasm. The feature of the evening was the presence of four men who have been far from Boston and unable to attend any class gathering for many years. These were Mullaly, W. V. Morse, Pendergast, and Simpson. Others present were Ames, Belcher, Boardman, Bourneuf, Butler, Finneran, Fisher, Fitch, Hunter, Mahar, Manley, Magrane, Nickerson, O'Neill, Joe Philbrick, Reynolds, Ritchie, Sawyer, Shedd, Stillings, Westcott, Whittet, "Rob" Whitney and "Doc." Williams. About eight o'clock the affair was wound up, and the class progressed—"marched" does not quite express it—to the Pops, where, with banners, badges and the usual '02 spirit, they were the leading class upon the floor. While 1910 had greater numbers, they had nothing on us in spirit (or spirits). The big '02 banner which headed the class into the hall was duly suspended in front of our ladies, who occupied seats together in the first balcony. One feature of the evening was the '02 airship, released from the upper balcony by the class president, which carried our numerals around over the heads of the audience for some time before the power gave out. Another feature was the arrival upon the floor of Mayor Fitzgerald. With his usual acute perception of where the "live ones" were he was soon located with '02, and with a cheer and a '02 badge was made a member of the class for the evening. Besides those who attended the supper at the Oxford there were at the Pops,—Besse, Collier, Haworth, and Patch.—Among the general news that has come in since the last issue of the REVIEW is the following: Joe Philbrick has returned to his old home, Newburyport, Mass., where he is mechanical engineer for the big silverware works of the Towle Manufacturing Company. His residence and mail address is 14 Arlington Street.—Simpson has returned from the Far East, his address being 175 Trenton Street, East Boston.—Belcher has completed the engineering work that took him to Havana, and is at his home, 14 Prospect Street, Winchester, Mass.—Archie Gardner writes from Barnetts Shoals, R. F. D. 1, Athens, Ga., as follows:—

I was genuinely shocked the other day to receive your letter, and learn what a delinquent member of my class I really was. It may be that I have been suffering from hook-worm, pellagra or some other lazy disease that is prevalent here in the south, but I did not realize to what

extent it had me. However, if it is not too late to come in now, won't you please pardon a repentant sinner? It's Sunday today, anyhow, so you must.

Since being south, I have been engineering and contracting, principally in South Carolina, but at present am with the Ambursen Hydraulic Construction Company as engineer of their contract at Barnetts Shoals, where we are building a hydro-electric development.

The shoals are about twelve miles from the nearest town, Athens. So, you see, as is so often the case with our ilk, we are away in the woods.

—Mullaly's address is 26 Eggleston Street, Jamaica Plain, Mass. He has been in musical work about Boston during the past winter, one of the productions for which he played being the Tech Show.—Russell Lowe was recently chosen a director of the National Association of Cotton Manufacturers.—The following item from a recent paper is of interest, and the congratulations of '02 are herewith extended:—

WASHINGTON, June 1.—Miss Mary Remy, daughter of Rear-Admiral George C. Remy, U.S.N., retired, and Mrs. Remy, was married to Captain John Winthrop Wadleigh, U.S.M.C., today in St. Thomas' Church. She was attended by Miss Angelica J. Remy, her sister, and Past Assistant Surgeon John L. Neilson, U.S.N., was best man. The ushers were Lieutenant Richard Wainwright, Jr., U.S.N.; Captain C. S. Williams, U.S.M.C., Mr. John T. Remy and Mr. W. B. Remy, brothers of Miss Remy.

After the ceremony there was a reception in the home of Admiral and Mrs. Remy, in New Hampshire Avenue. Among the guests were Rear-Admiral George H. Wadleigh, U.S.N., retired, and Mrs. Wadleigh, of Dover, N.H., parents of Captain Wadleigh, and their daughters, Miss Wadleigh, of Lexington, Mass., and Mrs. Severance Burrage and her two little daughters, of Lafayette, Ind., and Mrs. William Rush, of Wilmington, Del.

—The sympathy of all his classmates will be extended to Arthur Hall, whose only child, a little boy of five, died suddenly this spring of malignant scarlet fever.—Among other class news are the following changes by members,—Haworth is with the large dry-goods firm of R. H. Stearns & Co., of Boston,—“Freddie” Allyn has been transferred by the United States Steel Products Export Company from Montreal to Winnipeg, Manitoba.—Miss Hill is located with the De Laval Separator Company, 42 East Madison Street, Chicago—Herbert May is with the Protal Company, Yonkers, N.Y.—Jackson is with the American Cotton Oil Company, 443 East 6th Street, Cincinnati, Ohio.—Cates writes as follows:—

Am now on the general staff of Mr. D. C. Jackling, and am engineer of mines for the Utah Copper Company, Ray Consolidated Copper Company and the Chino Copper Company. My office is in the McCormick Building, Salt Lake City, but I am seldom in it.

He also reports that Brodie has gone from Salt Lake, and is now in the Orient, but still for the Sullivan Machine Company.—The class secretary's engagement was recently announced, the lady being Miss Helen A. Sewall, of Cincinnati, who is at present student secretary of the Young Women's Christian Association for Ohio and West Virginia. Miss Sewall hails from Farmington, Me., but has been in the Central States for some years, having graduated from the University of Missouri in 1904 and taking an A.M. the following year. She was then assistant professor of Greek and Latin at Hardin College, Mexico, Mo., before taking up her present position, two years ago.—Mr. Edward McVickar, '97-'98, who spent a year at the Institute, died suddenly in his automobile, May 31, as he was on his way from Babylon, L.I., to New York City. Mr. McVickar was a member of the well-known real estate firm of McVickar-Gaillard, Realty Co., of New York.

1903.

F. A. OLMSTED, *Sec.*, 93 Broad Street, Boston, Mass.

Fourteen members of the class assembled for an informal dinner at the Tech Union, May 20, and afterwards adjourned to the Pops for the remainder of the evening. While at dinner, Pelton looked in on us for a few minutes, but was unable to remain with the fellows for the evening.—Swett was married June 15 to Miss Christine Jewett Huntley at Leicester Junction, Vt.—Crosby writes of the New York crowd as follows, his letter being dated May 29:—

On April 8 Aylesworth, Chase, Cox, Cronenbold, Crosby, Joseph, Regestein, Scofield, Scudder and Taylor sat down to dinner together. With Cox on the board of governors and chairman of the house committee of the club and also the proud possessor of a locker, '03 is well cared for, and interest in their little reunions is increasing. After dinner the boys adjourned to the lounging-room, where, with the aid of a professional letter from Macdonald, they decided the momentous question of whether the recoil of a gun is greater while the projectile is still in the bore or after it has left the rifle.

Our May meeting was held on the 5th. There were present nine bachelors and three married men, as follows: Aylesworth, Babcock, Cox, Crosby, Dooley, Kershaw, Hiron, Macdonald, Scofield, Scudder, Skowroonski and Taylor. A vote was taken to ascertain the opinion of the boys on married life. Nine voted in favor of it and three against. It was announced that Endres is engaged, is looking for an apartment, and is saving his money. The engagement of Philip B. Rice to Dr. Rebecca C. Fiske is also announced. Field is with the Sullivan Machinery Company, with headquarters in New York. J. H. Brown is a consulting engineer in Brooklyn. After a bountiful repast, Taylor told the famous Getty beam joke, and then produced from his vest pocket the latest register of graduates, and proceeded to read from it the names

and positions of our classmates. As a man's name was read, information concerning him was volunteered by those present, and many an anecdote of Boston life was recalled by the mere mention of a name. This game was played through the L's, and is to be continued at our next dinner, which is to be June 2.

—Olmsted enjoyed a two weeks' vacation trip to Bermuda, which unfortunately kept him from attending the Pops this year. About seventeen men were present at the buffet lunch and Tech's Pop Night, and every one enjoyed the occasion. The following new addresses are noted: Edward J. Ruxton, care of A. C. Birnie Company, Ludlow, Mass.—William A. Howell, 28 Summer Street, Andover, Mass.—F. C. Hirons, Madison Square Garden Tower, New York city.—William M. Gilker, care of American Telephone and Telegraph Company, 15 Dey Street, New York city.—Edwin F. Greene, 70 Kilby Street, Boston, Mass.—Hayden writes as follows from Manila, P.I., where he is now stationed:—

I find myself still in the Philippines, helping to bring the Filipino to a realizing sense of his fitness for self-government. As the job is likely to be a long one, I sometimes feel that I should like to hear from some of the fellows whether they are making better progress on their respective jobs. I have recently started into contracting for myself, and am engaged in building an irrigation canal, the first of the kind done under the American government in the Philippines. Should I make a success of it and other future similar work to be done, I may not have to await the day of Philippine independence before returning to God's country.

1904.

R. A. WENTWORTH, *Sec.*, Southbridge, Mass.

M. L. EMERSON, *Res. Sec.*, 161 Devonshire Street, Boston, Mass.

There was a class dinner at the Boston City Club on Thursday evening, May 12, with seventeen men on hand. The excellent dinner was thickly garnished with experiences related by Steve and Trowbridge. As Kalmus was present, several of our autoists had a chance to tell him personally and pointedly their opinion of his device to assist the police in proving cases of overspeeding. After dinner eleven of the fellows continued their reminiscing at the Pops, where the music furnished an excellent background for the talk and additional refreshments. At the dinner it was decided to hold an outing on or about June 17, and Emerson, Stevens and Galusha were appointed to make arrangements.—There was a good representation of the Old Guard at the Pops on Tech Night, and it is recorded that one '04 yell was emitted.—Jack Draper, Haley, Haynes, Emerson, Hiller, Holmes, Knowlton, Kendall, Parker, Rockwood and Stevens made up the party

at the Vesper Country Club, Lowell. Kendall motored over from his home in Gardner. Our special correspondent writes:—

Haynes and Hiller stood 5-4 in tennis singles tournament when called off by rain. Haynes' team won relay race, and Haynes won golf tournament. Harry Stevens won the doughnut race, and Jack Draper the fat man's race. The rain couldn't bother us. When it rained too hard for tennis, we played golf, and then we changed our clothes. We surely were treated white, and the fellows who didn't show up can't realize what they missed. We passed a vote of thanks to the Vesper Country Club and to the club member through whose kindness we received the club privileges. An address to this gentleman, signed by all present, was also left, accompanied by two statues of "Mutt" and "Jeff." It was voted to have the same outing next year, if possible.

—As an election of class officers is due this year, Sweetser, Parker and Holmes have been appointed a committee to conduct the election. The constitution provides that an election committee shall be elected at the regular class meeting next preceding the election, but, as this committee was not elected last year, and as there was no regular class meeting this year, the secretary has made the above appointment. It is felt very strongly by the present officers that the affairs of the class can be handled vastly more effectively by men resident in Boston than by non-resident officers. You are therefore urged to vote for Boston men.—Carl King is still at New Haven, where he started a rope mill for the American Steel and Wire Company. He writes that starting a new mill with green help takes so much work that he has no time to find any news.—Mert Emerson had a fine vacation trip to Cuba this spring. With his usual luck he met all the prominent Americans and many prominent native officials. Mert is official treasurer of the Tech Show. Henceforward the Show will be on a strictly frenzied financial basis.—Currier Lang has recently written, announcing his engagement to Miss Carolyn B. Allen, of Cincinnati.—Emery Wilson has left the Mead, Morrison Manufacturing Company of Cambridge, Mass., where he was mechanical engineer on the design and construction of hoisting and conveying apparatus, to do similar work with the Brown Hoisting Machinery Company, Cleveland. His address is 10917 Ashbury Avenue, Cleveland, Ohio.—Kenneth Baum has recently gone to the lens department of the American Optical Company, Southbridge, Mass.—Pret Smith returned to this country last fall to take over the management of his father-in-law's business in Detroit. He has a daughter, born on December 29.—Emerson saw Turgeon and Mrs. Turgeon in Havana. They have since returned to this country, and are at Mineville, N.Y., where Turgeon is mining engineer with Witherbee, Sherman & Co.—Wentworth is doing special work at the American Optical Company, Southbridge, Mass., under the direction of H. L. Gantt, a noted

industrial engineer and factory management expert.—R. E. Adams is assistant superintendent of mines at Velardena, Durango, Mex., for the Guggenheim Exploration Company.—After considerable rough experience, W. D. Estes is in charge of the laboratory of the Federal Furnace Company, manufacturers of pig iron, Chicago. After a summer of railroad survey work on the Alaskan coast near Katalla, he put in a year on the Panama Canal.—J. W. Shaw wrote last winter from Cobalt, Ontario:—

Cobalt is rather quiet this winter. The greatest excitement is over the new gold finds in the Porcupine Lake country, about a hundred miles north of Cobalt. If reports are true, there should be something doing in that part of the country next summer. This mine (Cochran Cobalt Mining Company) is situated five miles from Cobalt. I have about thirty men at work, drifting and cross-cutting from a 230-foot level in our No. 1 shaft, and I am about ready to start a working shaft on or, rather, off another vein in the southern part of the property.

—New addresses are: Irving E. Adams, care of B. S. Pope, Parkersburg, W. Va.—Louis H. Asbury, Law Building, Charlotte, N.C.—W. U. C. Baton, 4620 South Atlantic Avenue, Pittsburg, Pa.—Alfred W. Burnham, New York and New England Cement and Lime Company, Hudson, N.Y.—L. H. G. Bouscaren, Keokuk and Hamilton Water Power Company, Keokuk, Ia.—H. H. Cerf, Box 435, Duluth, Minn.—H. G. Chapin, Town Hall, Greenfield, Mass.—E. L. Clifford, 411 Washington Avenue, Wilmette, Ill.—W. H. Edgecombe, 722 Cimarron Avenue, La Junta, Col.—Herbert W. Goddard, 500 Fifth Avenue, New York city.—R. E. Havens, care of Gabriel-Blake Company, 135 Broadway, New York city.—G. M. Homans, State forester, Sacramento, Cal.—E. R. Humphrey, Highland Avenue and Church Street, Ambler, Pa.—J. Lawrence Lyon, 136-138 Liberty Street, New York city.—Fred K. Merriman, 83 Lowell Street, Brockton, Mass.—E. L. Ovington, Newton Highlands, Mass.—R. B. Pendergast, Northwood, N.H.—Lee Phillips, 326 Sixth Avenue, Carnegie, Pa.—H. L. Pierce, Woodbury, N.J.—Leon Schwartz, 63 William Street, New York city.—C. S. Sperry, Jr., 1162 12th Street, Boulder, Col.—Sidney G. Ward, 860 First Avenue, Cedar Rapids, Ia.—G. Neville Wheat, Box 72, Station A, Houston, Tex.—O. M. Wiard, 308 West 15th Street, New York city.—C. B. Williams, 5 Kemble Street, Utica, N.Y.

1905

GROSVENOR D'W. MARCY, *Sec.*, 246 Summer Street, Boston, Mass.

June 1 was marked by the weddings of two '05 men. Fred Goldthwait and Miss Emma Florence Brown were married at Salem, and Robert C. Cutting and Miss Mae Carter Lusher at

Ben Lomond, W. Va. On June 8 Edward W. Washburn and Miss Sophie W. deVere were married at Roslindale. Washburn is instructor in charge of physics at the University of Illinois.—The following engagements are announced: James E. Barlow and Miss Georgia A. Manson. Barlow is engineer with the Bureau of Municipal Research, Cincinnati, Ohio.—J. H. Payne is engaged to Miss Nellie Elva Prussia, of Albion, N.Y. Payne is chief chemist with Jamestown Portland Cement Company, Yorktown, Va.—J. B. Reinhardt and Miss Alberta Harris Laine are engaged. Reinhardt is resident engineer with the New York Central & Hudson River Railroad, address 1101 Grand Central Station, New York.—Frank H. Langworthy is engaged to Miss Bertha M. Shaw.—Waldo A. Barber and Miss Florence Barlow are engaged. Barber is assistant purchasing agent with the United Drug Company.—George W. Prentiss and Miss Isabelle Wheat are to be married in June.—Bob Folsom is engaged to Miss Hattie F. Skillen, of Reading, Mass.—George A. Clapp is engaged to Miss Sarah L. Clapp.—Gene Burton reports the birth of Eugene Veasey Burton on April 30. 'Gene is mill superintendent with American Smelters Securities Company at Velardena, Durango, Mex. Evidently, the country agrees with 'Gene, Jr., for his father, who is keeping close tabs on him, reports as one week's progress an increase in weight from 8.1 to 8.2 pounds and an elongation from 19 inches to 20 inches, measurement taken in horizontal position, with maximum deflection of one inch.—The latest addition to the class roll is Miss Doris Clarke, daughter of W. D. Clarke, born May 24. Clarke is of the firm of Hegardt & Clarke, civil engineers, Portland, Ore.—The replies to questions on the statistics blanks sent out were most interesting, and indicate that '05 men are making splendid progress in all directions. Taking vital statistics first, of 210 replies 97 are married and 12 engaged, a total of 52 per cent. There is a cradle roll of 16 boys and 28 girls. Six out of every ten men married over a year are fathers. No one has more than two children. One has two boys, three have two girls and four have one of each. The results of the sealed statements of income were surprisingly high. 193 blanks were received, averaging \$2,070. 32 were for \$3,000 or over. The highest was \$10,500, next \$7,000, then two for \$5,000 and two for \$4,800. The average of the 100 highest was \$2,714.27. Six were less than \$1,000, the lowest being \$500. This would indicate that the whole class is pulling down over a half million a year. An encouraging prospect for the old 'Stute, if she can wait until we begin to die off. Remember that the Institute expects every '05 man to do his duty, and be looking up the legal form of a valid bequest.—The class dinner, held April 16 at the Union, was a very enjoyable one. Thirty-three men were present. Mr. Litchfield was our guest, and told us of the joyous reunion of the Class of '85 at "Camp Walker"

five years ago, and of their plans for even a better reunion this June. '05 was well represented at the alumni supper and Pop Concert. There was quite a contrast to last year, but, except for the graduating class, '05 seemed to have the largest number of men present, as usual.—C. E. Atwood, in sending in his statistics, writes as follows:—

Am sorry I cannot replace a few days on the calendar, and gain time and a chance to attend the dinner. No doubt you had a nice time. You ought to anyway, if only for enjoying the invigorating New England climate. I'd like a meal of that now. This part of the world is different, is enervating, and, as I haven't seen a tree for more than three years, I am getting rather tired of this sandy desert, where nothing but Chile saltpetre grows.

—The address on this letter looked like "Autogofasta, Chile, S.A.," which didn't sound very enervating to the secretary, but just about then John Glidden dropped in from Cerro de Pasco, Peru, via Montevideo and London, and with his superior knowledge of South American geography showed the secretary that Atwood was located at *Antafagasta*, which has a more tired sound. John, having also tired of three years' life at an altitude of 14,000 feet, decided to take a vacation and look around, and struck home just in time for the Commencement doings.—James A. Pitts was married on January 15 to a Miss Miller. Pitts is engineer with Frazer & Chalmers, in Johannesburg, South Africa, P.O. Box 619.—E. C. Smith is to take charge of a branch plant of the National Carbon Company at Toronto for the manufacture of dry batteries, which is to be known as "The Canadian National Carbon Company, Ltd."—H. H. W. Keith is in the estimating department of the Fore River Shipbuilding and Engine Works, Quincy, Mass.—C. A. Anderson has left Fore River, and is now in the economizer department of the B. F. Sturtevant Company at Hyde Park, Mass.—Leonard W. Cronkhite read a paper on "Physical and Mechanical Improvements in Sizing Methods" before the September meeting of the National Association of Cotton Manufacturers. Cronkhite, who is president of the Industrial Starch Company of Boston, is quite an active member of the association, and was a member of the committee on meeting for the convention held in Boston last spring. His paper appears in the association Transactions, No. 87. An extract from the February issue of *The Mining Magazine* (London) is as follows:—

The paper read at the November meeting of the American Electrochemical Society, by W. L. Spalding, of the University of Buffalo, is of interest, as it contains suggestions as to economies in the sources of power.

Here follows an abstract of the paper, then

As the problems of cheap electrolytic refining and the details of its study are receiving increased attention, owing to the erection in various parts of the world of gigantic central electric stations, Mr. Spalding's paper is of timely interest.

The review of the article occupies nearly an entire page.

1906.

RALPH R. PATCH, *Sec.*, 15 Lincoln St., Stoneham, Mass.

On account of a change of secretary and the fact that every one seems too busy to write, '06 notes are brief. If you have any '06 news or know any one who has, or if you hear of any one who has heard of any, just put the secretary on the trail, and we will enlarge the notes in the next number. The secretary, having a few hours to spare in New York, went to the Technology Club to look up some of the boys. In passing, we will just advise you to do likewise when you are in the town. They surely have a fine bunch of fellows there, and they know how to make you feel at home. We found Howard looking well and happy.—Keleher, just returned from a trip to Latin-American republics in the interest of the Holophane Company of New York, entertained for some time with interesting anecdotes of his South American trip.—Donovan was out of town on a building job.—McClintock was away on a trip to San Francisco.—They say Pat Kennedy has dropped out of sight completely, being on night shifts with Holbrook, Cabot & Rollins.—L. E. Hirt is with the Allis-Chalmers Company, gas engine department, Milwaukee, Wis.—H. V. Coes is in Boston, superintending the erection of a new plant for the Liquid Carbonic Company. He proudly announces the arrival of Kent Day Coes on February 14.—H. O. Mears is in Radersburg, Mont., with the Keating Gold Mining Company, prospering, we judge, by the size of the check we received in payment of dues.—E. S. Campbell has recently been appointed assistant professor in Carnegie Technical School. He has obtained a year's leave of absence, during which he expects to study abroad.—Louis R. Chadwick (XIII.) was married on June 6 to Gladys Orney, of New Bedford, Mass.—Earl G. Christy writes from Lake Superior that he is back as pilot of the steamer "Clifford F. Moll" for the season. He attended the concert of the Musical Clubs in Detroit, and felt very proud of the Tech clubs.

1907.

BRYANT NICHOLS, *Sec.*, 143 Garland Street, Everett, Mass.
 W. W. BIGELOW, *Res. Sec.*, care J. R. Worcester Co., Waltham,
 Mass.

I. *On the Part of the Secretaries*

Three years have passed since '07 left the Institute as an undergraduate body. We were then a fairly well united class. The co-operation which has existed between the secretaries and a large part of the members of the class since that time has kept us well united. To the circular letters which were sent out in April, one hundred and twenty-two "Reply Sheets" were received, besides several letters. This is quite gratifying, and yet not so good a showing as we ought to make. The secretaries wish at times that each member of the class might be secretary for a few months, and during his term of office send out a set of some three hundred and fifty letters similar to that mailed in April, and realize that it is no short nor simple task to do it. We feel sure that then the members who are so delinquent in replying would learn a lesson, and that they would never again let any message from the secretaries go unanswered. Our correspondent system has been rather falling behind lately, but we are going to revise our lists, stir up the correspondents, and try to get a personal word from every member of the class. We cannot urge too strongly the advisability of earnest co-operation in this matter. The ballots which were mailed to the class resulted in the election of the following officers for 1910-11: president, Alexander Macomber; vice-presidents, H. B. Hastings, H. S. Wonson; secretary-treasurer, Bryant Nichols; resident secretary, W. W. Bigelow; member of executive board, Lawrence Allen; auditors, E. H. Packard, D. G. Robbins; nominating committee, J. P. Alvey, R. H. Crosby, S. A. Marx.

TREASURER'S REPORT, JULY 1, 1909, TO JULY 1, 1910

Receipts

From Alexander Macomber, treasurer	\$87.94	
J. A. McElroy for Senior Portfolio	4.00	
Class dues, 1909-10	63.00	
Interest	1.59	
Class reunion, 1910, 30 at \$1.50	45.00	\$201.53

Expenditures

To W. W. Bigelow, resident secretary, for expenses	\$10.00	
D. G. Robbins (McElroy's portfolio)	4.00	
Catalogue box and guides	2.50	
Deficit incidental to class dinner, Dec. 18, 1910	9.00	
Printing 2,000 letter-heads	6.00	
Printing ballots, circulars, postals, incidental to reunion, 1910	10.75	
Printing circulars and bills sent out in December, 1909	9.50	
Alumni Association, clerical work	6.54	
Postage, including 1,000 stamped envelopes	22.84	
Telephone and express85	
Expense for secretary to represent class at dinner to Mr. J. P. Munroe, Jan. 11, 1910	5.00	
Bouquets for class reunion, 1910	4.80	
Hotel Nottingham, reunion dinner, 45 at \$1.50	67.50	159.28
Balance in Chelsea (Mass.) Savings Bank	39.27	
Cash on hand	2.98	<u>\$201.53</u>

To explain the difference between receipts and expenditures for this dinner, we will say that over fifty men indicated their intention of attending the dinner, so that we had to guarantee the hotel for forty-five plates. Only thirty men showed up. Total number of men who paid dues for 1909-10 is one hundred and fifty-three. The dues for 1910-11 are now payable. It will save the time of the secretaries and postage expense for the class if you will send \$1 to the secretary-treasurer at once. We need to collect as large a fund as possible from dues now while the class is large and young, so that, as the numbers and interest die out, we shall have a goodly sum to fall back on.

II. The Class Reunion

This was not such a success in point of attendance as we had hoped, but in every other respect it was up to the '07 standard. The following twenty-seven men were present at the class feed, which we enjoyed at Hotel Nottingham: A. B. Arnold, C. E. Allen, Lawrence Allen, H. B. Alvord, W. W. Bigelow, L. A. Dickinson, J. E. Garratt, C. D. Howe, R. E. Keyes, W. F. Kimball, Alexander Macomber, E. A. Miner, H. L. Moody, M. E. MacGregor, H. W. Mahr, E. P. Noyes, Bryant Nichols, G. R. Norton, K. W. Richards, Everett Rech, H. D. Reed, R. E. Sampson, Gilbert Small, E. H. Squire, E. E. Turkington, H. S. Wonson.

The secretary made a brief report, and President Macomber pledged his loyalty to the class interests, and urged the men to work together for the class and the Institute. Charlie Allen was toastmaster. The most delightful part of the gathering was the election of Bursar Rand to honorary membership in the class, and the talk about Institute affairs which he gave us. Although only a few of us were present to personally welcome Mr. Rand to be "one of the boys" with us, the whole class is honored to have such a loyal member, and the secretaries suggest that many of the boys write to Mr. Rand, and tell him how they feel about this. After the dinner the class went to Symphony Hall to the "Pops," where Shirley Black, H. R. Draper, G. H. Bryant, W. W. Pagon, R. K. Taylor, A. R. Jealous, R. D. Gale and L. H. Cutten joined us. Interchange of experiences and recalling of old times gave all a very pleasant evening.

III. Married Men and Class Babies

1907 is progressing well along these lines. As far as the secretary knows, we have 54 married men and 25 children, as follows:—

<i>Name</i>	<i>Married</i>	<i>Children</i>	<i>Born</i>
Allen, Lawrence	Jan. 18, 1908	Lawrence Allen, Jr.	Aug. 28, 1909
Allen, L. L.	Oct. 28, 1908		
Ashenden, R. C.	June , 1908	R. C. Ashenden, Jr.	Sept. 6, 1909.
Black, A. S.	Dec. 2, 1908	Alice Baker Black	Oct. 3, 1909
Boles, E. D.	March 21, 1908		
Bowen, C. A.	Oct. 15, 1909		
Bragdon, C. R.	June 16, 1909	Florence Elizabeth Bragdon	March 14, 1910
Burhans, H. N.	Nov. 24, 1908		
Chaffee, E. L.	June 23, 1909		
Chase, H. R.	Sept. 1, 1908	Barbara Chase	May 30, 1909
Coffin, W. B.	May 6, 1909	William Balch Coffin, Jr.	May 20, 1910
Crosby, R. H.	June 16, 1909		
Darling, Miss Maude F.	March 19, 1910		
Davenport, L. D.	Sept. 6, 1909		
Davis, J. A.	Oct. 29, 1908		
Dean, C. S.	June 30, 1908		
Duncan, H. S.	July 1, 1908	Bernice Louise Duncan	May 12, 1909
Dyer, Kate W.	Date not known	Osborne Coe Dyer	Aug. 23, 1908
Emilio, S. G.	Date not known	Grace S. Emilio	July 11, 1909
Gaylord, J. M.	July, 1908	James M. Gaylord, Jr.	July 13, 1909
Gonder, W. B.	Feb. 28, 1910		
Griffin, G. A.	June 18, 1908	Charlotte Sanford Griffin	Jan. 7, 1910
Hallett, L. F.	June 14, 1909	Lucius F. Hallett, Jr.	April 16, 1910
Hastings, H. B.	Dec. 18, 1907	Hudson Bridge Hastings, Jr.	April 14, 1910
Hudson, R. G.	Feb. 3, 1909	Gerald Carden Hudson	Sept. 16, 1909
Jaccard, F. C.	Oct. 18, 1909		
Keeler, W. I.	Feb. 23, 1909		
Kingsbury, H. A.	Aug. 1, 1908		
Knight, R. F.	Oct. 7, 1908		
Kolatshevsky, A. T.	Nov. 18, 1908	Nicholas A. Kolatshevsky	Feb. 6, 1910
Lamont, C. R.	June, 1905	Constance	September, 1906
		John	May, 1908
		Benjamin	September, 1909
Leavell, J. H.	June 12, 1907		
Lee, E. G.	Oct. 7, 1908	Dorothy Guild Lee	Dec. 15, 1909
Loring, H. D.	Nov. 19, 1907		
MacGregor, M. E.	Dec. 17, 1909		

<i>Name</i>	<i>Married</i>	<i>Children</i>	<i>Born</i>
McChesney, H. H.	Oct. 12, 1909		
Moller, Kenneth	June 19, 1907	Elizabeth Sweetser Moller Susan Anderson	Aug. 19, 1908 Jan. 12, 1910
Moody, H. L.	Nov. 4, 1907		
Murphy, G. A.	Aug. 10, 1909		
Nichols, Bryant	Sept. 14, 1909		
Nichols, P. R.	June 20, 1907		
Packard, E. H.	June 27, 1908		
Parlin, R. W.	March 19, 1910		
Pope, Allen	June 10, 1908	Thomas Allen Pope	April 10, 1909
Russ, D. E.	June 30, 1909	Marion Walton Russ	March, 1910
Sanders, R. B.	Sept. 18, 1907		
Smith, T. L.	June 18, 1907		
Soule, Winsor	Oct. 19, 1907		
Squire, E. H.	Jan. 26, 1910		
Starkweather, O. H.	Sept. 18, 1907	Oscar Allen Starkweather, Jr.	Date not known
Van der Stucken, F. T.	June 2, 1909		
Vose, C. A.	Jan. 8, 1908	Carol Vose	Jan. 1, 1909
Walker, P. B.	Jan. 26, 1910		
Wiggin, A. E.	Sept. 18, 1909		

If there are any who are eligible to position in this list who are not found here, please communicate with the secretary, giving the proper information. Also will those regarding whom there is some data lacking in the above list please write to the secretary, and provide him with the information.

IV. *Pithy Facts Concerning Some of our Members*

The facts below are gathered mostly from the "Reply Sheets," but partly from other sources:—

P. L. Adams says: "Am taking course in street railway work with Public Service Railway Company of Newark, N.J. Work in all departments. At present making electrolysis tests for distribution department." His address is 88 Sherman Avenue, Newark, N.J.

Charlie Allen announced his engagement on March 25. He says that "Tech may be h—l, but single life is h—ler." Charlie is assistant superintendent of I. Prouty & Co., Inc., of Spencer, Mass., shoe manufacturers, in charge of heavy upper leather department.

Lawrie Allen is manager of the cost department of W. H. McElwain Shoe Manufacturing Company, 348 Congress Street, Boston, Mass.

L. L. Allen has charge of repairs of school buildings and the purchase of supplies of the public schools of Brookline, Mass. Address, 16 High Street, Brookline.

Jim Alvey is assistant engineer in the hydro-electric department of the Arnold Company, 181 La Salle Street, Chicago. He has been on construction work in the west and design in the Chicago office. He says that '07, in proportion to its numbers in Chicago, makes the best showing of any of the recent classes at the weekly luncheon given by the North-western Alumni

Association and that John Frank holds the record for attendance and enthusiasm.

H. B. Alvord is going to Bowdoin College, Brunswick, Me., in the fall to take the place of Hud Hastings, who is going west. (See below.)

A. B. Arnold is with the American Agricultural Chemical Company of Boston. He is just completing the supervision of the erection and equipment of the largest and most modern sulphuric acid plant in the country at Carteret, N.J.

C. F. Baker, 1359 East 53d Street, Chicago, is with Holabird & Roche, architects. The firm employs one hundred and twenty men in their office. Baker is one of six Tech men. He spent five months in Europe travelling last winter, and met many Tech men in Paris and Rome. He says Tech men are making a fine showing in the French school of architecture.

C. C. Barker is one of the assistants to the county engineer of Essex County, Mass., office at Court House, Salem, Mass. He is now engineer in charge of the relocation of a street in Haverhill, Mass.

E. W. Bonta is head draughtsman with Alfred T. Taylor, architect, Syracuse, N.Y. He says they have already sent one man from his office to Tech, and hope soon to send another.

J. C. Bradley is with the American Brass Company, Torrington, Conn. In May he was in Kenosha, Wis., with the Chicago Brass Company, a subsidiary company of the Connecticut company, where, he says, is the best-equipped brass rolling mill in the world.

C. R. Bragdon is with R. A. Worstall, Chicago. He is doing analytical and consulting work, specializing in paints and varnishes, serving people all the way from Halifax and Boston to San Francisco and San Antonio.

George Bryant writes on the letter-head of Edwin Shivell Advertising and Selling Agencies, Inc., Boston, Mass., as follows:—

In the last issue of the REVIEW I note that you are conducting a small publicity campaign for Bryant. Confidentially and in a whisper I can tell you where he is. He is connected with an advertising agency, and the superinscribed head will give you a clew to his address.

An interview with him might be quoted as follows:—

Have had a most desperately exciting and busy three years since I left Tech. Dabbled in the ways of a scribbler for the newspapers for a time, was associated with the Boston *American* as gore dripper from Police Headquarters, with a murder story to write up every other hour. Did a term service with the Boston *Herald* as a rewrite man, cooling down the fervid outpourings of rattled cubs till it was fit to publish, and then one afternoon over a quiet cup of tea took up work with the *Transcript*. Had an opportunity to vent my spite on numerous actors and actorines in the capacity of writer for the dramatic columns. The staid and prosy existence of a drab intellectual existence drove me out into the rush again, and I landed here as an advertising writer quali-

fied on all subjects from pins to persimmons and lager to laudanum. I am one of the members now, and a strictly business man. This interview finds me on the verge of a hurried trip to Detroit to close up a good contract.

Have seen all the Tech Shows since '06, and have still kept my hand in by persuading two managers to accept the same number of short sketches for vaudeville. Have written a poem or two and a few short stories, the latter having found their way to print by the usual devious methods.

I would like to get in touch with some of the fellows, and would, if given the opportunity to subscribe for same, take tickets to any '07 feeds, etc., which might be scheduled for this vicinity. Fortunate that I have not had to wait for my food all the time since the last Tech spread I attended. But, as it is, a fellow sometimes gets hungry for other things than *chefs-d'œuvre*, and I would like mightily to see some of the men again.

The home address most likely to reach me is 4 Lincoln Street, Haverhill, Mass.

Harry Burhans is secretary of Burhans & Black Company, wholesale and retail hardware merchants, 227 McLennan Avenue, Syracuse, N.Y.

E. L. Chaffee is teaching and doing research work in the Graduate School at Harvard. The class extends to him its sympathy in the death of his wife on June 7 from appendicitis after a very brief illness.

Kenneth Chipman left in May for six months' work on Vancouver Island, B.C. He is with the Geological Survey, Ottawa, Canada.

R. F. Conron is vice-president of Thomas Conron Hardware Company, Danville, Ill. He says he works from 8.30 A.M. to 10 P.M., but business for him every time.

Sam Coupal is manager of mine and concentration plant of Providencia Mining Company, Apt. 49, Parral, Chihuahua, Mex. He has about fifty Mexicans on the job, and is the only one who can speak English.

E. R. Cowen, 1326 Stock Exchange Building, Chicago. Cowen is engineer with the Ferro Concrete Construction Company, whose home office is in Cincinnati. He was with the Lackawanna Steel Company until the panic, then after several months at home went with the P., C., & St. L. R.R. at Pittsburg until he went to his present position.

Crosby is draughting now with Sargent & Lundy, engineers, 1720 Railway Exchange Building, Chicago.

L. D. Davenport writes from Chisholm, Minn. He is with Oliver Iron Mining Company, having been in the engineering department since August, 1906. He looks after the Monroe Underground Mine, and is general ore estimator for the Chisholm district. He writes that—

This is the place where two-thirds of the iron used in the world comes from. Single open pits with more than 50,000,000 tons of ore uncovered. One can go down one shaft and come out one and a quarter miles away. But no other Tech men! Why not?

L. R. Davis is with Theodolite Mining Company, Leadville, Col. "We are opening up a very promising gold prospect 13,400 feet above sea level."

C. S. Dean is mechanical draughtsman in the office of the yard electrician of Navy Yard, Norfolk, Va. He does testing as well as draughting.

Dickinson is map draughtsman with the Baldwin Manufacturing Company, Boston.

Parker Dodge is studying law at George Washington University and solicitor of patents when "he takes himself seriously." His work is writing and amending specifications, helping with search work, etc.

C. N. Draper is assistant chemist in the office of Public Roads, United States Department of Agriculture, Washington. They act as federal experts and in consulting capacities for States, counties, and manufacturers.

S. J. Egan says that officially he is hull draughtsman, but he is doing estimating on the cost of work, mostly ship fitting, blacksmith and joiner work in Puget Sound Navy Yard, Bremerton, Wash.

Eisenhart is assistant superintendent of the chemical plant of the Eastman Kodak Company at Rochester, N.Y. This is a large department, and they manufacture chemicals chiefly.

John Evans is chief engineer, Denver Tramway Company, Denver, Col.

O. G. Fales has changed from the commercial end of the Gregg Company, Ltd., to the engineering end, and now has charge of building a new plant at Newburg, N.Y.

H. P. Farrington is in New York city with Viele, Blackwell & Buck, consulting engineers. He urges all '07 men in New York to join the Technology Club of New York, and also wants any fellows going there for a trip to call at the club-house.

Garratt is working for Barrows & Breed. He has been bossing the erection of a steel stand-pipe 25 feet diameter and 100 feet high at Gardner, Mass.

J. M. Gaylord writes from Minidoka, Ida.:—

I am at present in charge of the operation of the Minidoka power system, embracing a 5,000 Kw. water power plant and three pumping-stations. The Minidoka project contains 125,000 acres of irrigable land, four towns, several thousand cords of sagebrush and many thousand jack-rabbits. Tech men passing over the Oregon Short Line will please stop off at Minidoka, find the red-whiskered government mail man and drive out to the dam with him. We will be glad to hand you the joyous mitt.

"Tommy" Gould is at the counter factory of the W. H. McElwain Shoe Manufacturing Company, Manchester, N.H.

George Griffin is now on the New York Board of Water Supply at Valhalla, N.Y.

L. F. Hallett is now engaged in the erection of Clayton College, a trade-school for orphan boys. He says it will do anything from interior decorating to pipe-fitting. Address, 900 Logan Avenue, Denver, Col.

A. E. Hartwell is with Hartwell Iron Works, Houston, Tex. His business includes foundry, machine, structural and sheet steel work. He says business is generally very good.

After August 1 Hud Hastings will be with Joseph T. Ryerson & Son, 16th and Rockwell Streets, Chicago. Hud says he has got to make money faster to give Hud, Jr., a liberal training in the Class of '31, M. I. T. So he is going into the steel business.

J. P. Hinckley is salesman for the L. E. Knott Apparatus Company, dealing in laboratory equipment for physics, chemistry and biology. Address is 16 Harcourt Street, Boston.

Clarence Howe is working for J. R. Worcester Company during the summer, but is going back to Halifax to be professor again this fall.

Ralph Hudson is instructor in electrical engineering at Tech, and also consulting engineer for National Insulator Company.

F. C. Jaccard is with the Steptoe Valley S. & M. Company, McGill, Nev. He is assistant smelter engineer, in charge of repair and operation work. He says there are very few Tech men in that district now, but lots of room for more.

Arthur Jealous is assistant electrical engineer with the American Woollen Company at Lawrence, Mass. He is very busy with work on their new Ayer mill and addition to the Wood Mill.

J. F. Johnston, Jr., 175 Kingston Avenue, Oakland, Cal. He is now in charge of designing steel for a 12-story building. He hopes to start in for himself soon.

R. G. Kann is superintendent and secretary of the Penn-American Plate Glass Company, Alexandria, Ind. He is "just plugging along and thoroughly happy."

W. I. Keeler has just gone into business with M. W. Davenport, chemist to the city of New Britain, Conn., under the firm name of Davenport & Keeler, 214 Main Street, New Britain, Conn. They are to do all kinds of foundry and sanitary work, and have several large contracts already.

A. S. Kendall is in business for himself,—architecture, specializing in hospital planning. He expects to be married this month.

R. E. Keyes is with the B. F. Sturtevant Company, Boston. He says: "The mechanics of heated atmosphere is my specialty. Ozone is my hobby."

W. F. Kimball is with Charles H. Tenney & Co., 201 Devonshire Street, Boston. There are thirteen public service corporations

operated by this company. These are gas and electric companies, and the engineering for all is handled by F. C. Sargent. Kimball is one of Mr. Sargent's assistants. Kimball was in Pittsburg and Washington recently on a trip, and speaks of seeing Jansson and Sage.

Kolatschevsky has for an address 35 Rue Coquilhat, Anvers, Belgique. In other words, he is with the Bell Telephone Manufacturing Company at Antwerp, Belgium,

Working as assistant in engineering laboratory. Telephony is entirely undeveloped in Europe as compared with United States of America, and the prospects seem to be good. Am the only Tech man in Belgium. Send over some more, please! Greetings and best wishes to all.

C. R. Lamont writes from Pioche, Nev.:—

Have leased the Poorman Mine, and have erected a small concentrating mill. Am operating the same. Big washout on the Salt Lake route has cut us off from railroad communication for six months, and put the camp "on the bum." Better times coming.

Stud Leavell is superintendent of mill and cyanide works at Buffalo Mine, Cobalt, Ontario, Canada. He turns out from two to three thousand dollars' worth of silver per day. He says he is about as well off as before his injury.

E. G. Lee, 54 Emerson Street, Portland, Me., with Sawyer & Moulton:—

We are building the Ayischohos Dam for the Androscoggin Reservoir Company. This dam, about forty miles from Berlin, N.H., will, when completed, form one of the largest artificial storage basins for power in the country. I am doing cost keeping on the job.

H. C. Libby is in the bridge department of the chief engineer of maintenance of way of the Southern Railway, Washington, D.C. He is figuring all sorts of structures, and is "using everything Pop Swain succeeded in cramming into his head."

Roy Lindsay is with Pratt & Lambert, Buffalo, N.Y. He is chemist. This concern make the famous "61" floor varnish. He wants us all, when we build our houses, to be sure to use Pratt & Lambert varnishes.

H. D. Loring, with the Ferro Concrete Construction Company, Cincinnati, has been located in Montreal, Chicago and Cincinnati, always with this concern. He expects to be located in Cincinnati for some time now, and has gone to housekeeping there.

G. D. Luther, 1424 Wazee Street, Denver, Col., is now manager of the Denver office of the Electric Storage Battery Company, covering the territory of Colorado and Wyoming.

Macomber is assistant engineer with the same firm that Kimball is with (see above). His address is 237 Berkeley Street, Boston.

H. W. Mahr is chemist for Haffenreffer & Co. at Boylston Brewery, Jamaica Plain, Mass., and booze expert in chief for the company. He says he got his training for the job largely at the chapel and C. Wirth's.

W. H. Martin is with J. G. White & Co., Box 684, Albany, N.Y. He is engaged in the double tracking of sixteen miles of the Albany Southern Company's third rail system.

J. A. McElroy was appointed April 1 division engineer, highway department, State of Connecticut. He will have charge of all surveying and state road construction in Fairfield County under the State Highway Commission.

J. M. McMillin is with Henry L. Doherty & Co., 60 Wall Street, New York, this being the head office of a chain of gas and electric and railway companies.

Nat Middleton is the general superintendent of Thomas C. Basshor Company, 28 Light Street, Baltimore, Md. Also he is president the United Engineering and Construction Company, general contractors.

Addison Miller is with the American Hoist & Derrick Company, St. Paul, Minn. They make all kinds of cranes and hoisting machinery.

E. A. Miner is with the Boston Elevated Railway Company. His work is calculations connected with remodelling of stations, extensions, etc.

Kenneth Moller is with Fuel Oil Engine Company, Providence, R.I. He has been building a large horizontal, double acting, two-cycle, crude oil engine of the Diesel type.

Harry Moody says he has a mighty good job in the sales department of the Westinghouse Machine Company, 131 State Street, Boston.

J. G. Moore, United States Naval Station, Key West, Fla., says the work is pretty commonplace, except that its being in the tropics gives some variety. He has done inspection work in his shirt-sleeves in February, and has waded about in water up to his waist, making surveys.

George Otis has general charge of the sales and contracts of the American Blue Stone Company, who are wholesale producers of the blue stone used for the trimmings of buildings.

E. H. Packard is with the Eastman Kodak Company now, and address is 13 Meigs Street, Rochester, N.Y. He expects that business may take him and his wife to Europe this summer.

W. W. Pagon has been studying advanced design under Professor Swain at Harvard for a year. His address is now 1301 St. Paul Street, Baltimore, Md.

Raymond Parlin has reason to receive congratulations from all of us because of his marriage to Miss Maude F. Darling ('07, M. I. T.) on March 19. They are living at 3 Forest Park, North Cambridge, Mass. Parlin is doing sanitary engineering in Boston.

Pastoriza is with the Telluride Power Company, Provo, Utah. He is electrical man in the chief engineer's office, and is aiming for the job of chief. His company has a high tension transmission system of about five hundred miles of 40,000 volt line.

W. P. Rayner is in business for himself, distributing Frayer-Miller motor trucks. He controls eastern Pennsylvania, southern New Jersey and Delaware. His address is 2120 Land Title Building, Philadelphia.

E. H. Reed, Jr., address 20 rue de Harlay, Paris, France. He is studying architecture, and entered L'École des Beaux-Arts in June.

John Rehn is engaged. He says he "just had to be." He is working for Moore Electrical Company, 169 Malven Street, Newark, N.J.

Don Robbins has been on a month's trip abroad with Mathesius, '06.

Russ is president of the Russ Manufacturing Company, Oil City, Pa. They make high-grade gelatines, moving-picture trade being their specialty.

Merton Sage is assistant patent examiner in the division of electro-chemistry and metallurgy, Washington, D.C.

T. L. Smith has charge of the piece-work and scheduling departments at the Rogers works of the American Locomotive Company, Paterson, N.J. He says E. C. Richardson drops in occasionally, and C. A. Bowen visited him in connection with his factory inspection.

Winsor Soule says he has been doing some interesting architecture work, especially the superintending of the alterations at the Boston Art Club. He has been doing some work on his own hook outside the office. He did a gymnasium and two houses for Bryn Mawr College last year.

Phelps Swett, professor of mathematics in Middlebury College, Vermont, says that three of the faculty, including himself, are to take a trip into Labrador this summer, partly for the purpose of securing data for a scientific society of Washington, D.C. Phelps recently took the Easter cruise of the Hamburg-American liner "Moltke" to the West Indies, chiefly to look up E. V. Potter's record while he was in Havana,—the "Little Paris."

Bob Thayer has recently (June 9) announced his engagement to a Chelsea (Mass.) girl, Miss Maude F. Gilbert. We understand that Bob expects to be married in the fall. He is instructor in mechanical engineering at Tech.

C. J. Trauerman is now assistant superintendent of Pelican Mine, Lake City, Col., under C. F. Willis (M. I. T. '06).

J. E. Tresnon is now at Ames, Col., with the Telluride Power Company. He says that he believes he got with the company because of the excellent work done by Moore and Pastoriza (both '07), who are in line for some big things.

C. A. Vose is in the cranberry business at Marion, Mass. He says he has good prospects for making good money. He works hard in the summer, and "spends the money in the winter buying shoes for the baby." He says he is getting fat.

H. S. Wonson leaves Tech as assistant this spring, and goes to work for W. H. McElwain Shoe Manufacturing Company as right-hand man to Lawrie Allen.

V. *Regarding Addresses*

In addition to the above there are a few changes of address, as follows: J. M. Barker, 27 Clinton Street, Watertown, N.Y.—E. R. Bitler, 202 West Lloyd Street, Shenandoah, Pa.—W. H. Bradshaw, 1329 Pacific Street, Brooklyn, N.Y.—L. W. Brock, Blake Building, Room 404, Boston, Mass.—A. H. Cenedella, 68 School Street, Milford, Mass.—J. P. Chadwick, Needles Mining and Smelting Company, Box 396, Needles, Cal.—G. A. Crane, care of Charles Coops, 1520 South 9th Street, Tacoma, Wash.—F. G. Dempwolf, 701 George Street, York, Pa.—R. N. Hall, 152 Adams Street, Milton, Mass.—E. F. Kelly, care of Alphonse Custodis Chimney Construction Company, Bennett Building, New York city.—John Kimball, 2505 West 18th Street, Chicago, Ill.—H. C. McRae, Colgate, Baltimore County, Md.—H. J. Morton, 212 Lumberman's Building, Portland, Ore.—Eugene Phelps, Miami Copper Company, Miami, Ariz.—Allen Pope, 3157 Mt. Pleasant Street, Washington, D.C.—Everett Rech, 15 William Street, New York.—H. C. Richardson, Navy Yard, Philadelphia, Pa.—C. F. Runey, Cudahy Packing Company, South Omaha, Neb.—E. H. Sargent, State Water Supply Commission, Albany, N.Y.—F. B. Shields, 215 Chestnut Street, Seymour, Ind.—E. A. Thornton, Ray, Ariz.—A. K. Tylee, care of George T. McLauthlin Company, 120 Fulton Street, Boston, Mass.—S. R. T. Very, 8 East 43d Street, New York.—W. G. Waldo, Box 141, Mercedes, Tex.—E. S. Wires, care of E. Stanley Wires Company, 9 Park Street, Boston, Mass.—W. A. Young, Exeter, N.H.

If any one can give any information concerning the addresses of the following members of the class, will you kindly write to the secretary:—

J. G. Barry, C. A. Bettington, A. H. Donnewald, S. G. Godfrey, F. E. Goodnow, J. B. Harlow, J. K. Heydon, B. B. Holmes, F. H. Kales, W. H. Otis, W. G. Perry, V. S. Rood, R. B. Sanders, E. T. Williams, E. F. Whitney.

1908.

JOHN T. TOBIN, *Sec.*, care F. F. Harrington, Bridge Engineer
Virginian Railway Company, Norfolk, Va.

RUDOLPH B. WEILER, *Res. Sec.*, 26 Brooks Street, Brighton, Mass.

I. *On the Part of the Resident Secretary*

At the dinner held at the Technology Club, May 10, the following attended: H. T. Gerrish, H. W. Flaherty, E. R. Smith, O. S. Lyon, C. W. Whitmore, W. D. Ford, L. B. Ellis, H. B. Luther and R. B. Weiler. Owing to the slim attendance, it was decided to notify those in Boston and vicinity of the next dinner by mail. The next dinner will be July 12 at the Technology Club at 6.30 p.m.—Among those who attended the Pops were: L. H. Allen, G. M. Belcher, H. H. Bentley, M. L. Bullard, C. A. Brown, B. W. Cary, C. N. Cochrane, Langdon Coffin, F. A. Cole, H. A. Cole, L. B. Ellis, H. C. Elton, W. F. Dolke, P. A. Esten, H. C. Faxon, R. C. Folsom, H. T. Gerrish, H. W. Flaherty, R. T. Hyde, Lee Hagood, H. B. Luther, O. S. Lyon, H. S. Osborne, C. D. Putnam, R. I. Ripley, F. J. Robinson, F. W. Sharman, H. Schriefer, Kurt Vonnegut, C. W. Whitmore.—Among those who attended the spread were: L. H. Allen, G. M. Belcher, R. C. Folsom, H. T. Gerrish, Lee Hagood, H. B. Luther and O. S. Lyon.—At the Commencement exercises this year the Class of '08 had the distinction of having one of its members receive the first degree "Doctor of Engineering" given by the Institute. Of course Harold S. Osborne was the fortunate man.—H. B. Luther intends to go to Germany for a year or two to study in the fall.—Your resident secretary has temporarily left Boston, and is now (July 8) in Chicago, 5315 Washington Avenue. However, mail had better be addressed to 26 Brooks Street, Brighton, Mass., as heretofore. "Pop" Gerrish has kindly consented to look after the bi-monthly meetings at the Technology Club until your resident secretary's return. Reminder: the dates of the next two meetings are July 12 and September 13.—It is with extreme regret that we report the death on June 22 of Mrs. Ann Eliza Ferry, wife of Louis K. Ferry, '08, at Pittsfield, Mass., of tuberculosis. We take this opportunity of extending to our bereaved classmate the sincere sympathy of the class.

II. *Matrimonial*

George T. Glover was married on April 6 to Miss Eva Maria Deisel at Lima, Ohio. See the secretary's remarks.—Carl W. Kenniston was married on April 8 to Miss Annetta May Johnson, of Rolla, Mo. At home after May 1 at Victor, Col.—Alec Newton Penny was married on May 1 to Miss Anna Eva Buths at Hart-

ford, Conn.—Conrad Youngerman was married to Miss Mary Meadows, of Dorchester, on June 15.—The engagement is announced of Rudolph B. Weiler to Miss Emily Augusta Gilchrist, of Brighton.

III. *On the Part of the Secretary*

The following notes were received under date of May 14:—

I received your letter yesterday, and was glad to hear you were so awfully busy. Since writing you before, I have made two jumps. I left Sewall's Point on the coast about the last of March, and went out into the mountains of West Virginia. I have been here at Victoria five days now, after spending about five weeks in Princeton, W. Va., on construction work. At Victoria I am inspecting the construction of a round-house, machine shop, power station and railway station, and will probably be here till September. The work is of the very latest type of mill construction, and is very interesting.

As for Victoria, it is just a little hustling division point on the road, a typical railroad town. Our job is the sole attraction and the attendance is regular and good. At Princeton there was a moving-picture show and once in a while an old-time medicine show, exploiting the wonders of old Doctor Wanego's worm wafers or some other renowned remedy. Victoria, however, boasts none of these attractions.

Two of us had a rather unexpected trip to Charleston, W. Va., about two Sundays ago. At Princeton there are two trains a day, one east and one west, and often, in order to make up for the week, we'd get on one train, invade the club car, eat till we reached the meeting-point of the trains, shift, and eat our way back. Well, this particular day we passed on the fly, with the result that we had a real pleasant trip along the Kanawha River to Charleston, W. Va., passing through the coal fields of the Big C. & O., as they call the Chesapeake & Ohio. At Charleston, for the first time, I saw a river packet,—those wide-mouth steamers that drop down the Ohio and Mississippi. The next day we returned to Princeton, to be given the laugh by every railroader in town.

Well, I haven't heard from many of the bunch this quarter, probably due to my being changed around a bit.

The first item of news concerns the senator from Grand Island, Neb. Old George has gone and done it. The son of a gun's a benedict. I attach the announcement, and say, I know that every fellow in the class joins me in wishing "G. Thummel Glover and wife" (looks fine, doesn't it?) all the happiness in the world and just a little bit more.

Next! Up steps Howard E. Batsford, looking happy as you please. After casting a fond glance at a fair maid by his side, he blithely remarks: "By the way, I see by the April number of the REVIEW that Thurlow has announced my engagement. Yes, while I have been doing strenuous duty at experimental work on all kinds of shifts at the works, I was also doing a little private research. So, you see, I needed an assistant, or, it may be, a boss. However, the young lady's name is May Louise Austis, of Niagara Falls, and we are to be married on the 10th of August." Hurrah! regular '08 yell with Batsford on the end. Everybody's wishing you joy, Bat, old boy. Batsford's address is 222 5th Street, Niagara Falls, N.Y.

He writes that C. W. Clark has taken a position as superintendent of the Bowker Insecticide Company of South Boston, and seems satisfied. He also states that Thurlow has advanced to head chemist of the sugar company at Brush, Col. I'll be dogged if that doesn't make us rodmen feel sort of slighted, doesn't it?

Batsford's own work is entirely experimental, giving him fine practice in designing apparatus, draughting, chemical analysis, electrical and electric furnace operation, pipe-fitting, book-keeping and management of men. Going some, isn't it?

Waldo York has a new job. He is now working on the Cape Cod Canal, and wants to hear from everybody. Address him at Bourne, Mass., care of Cape Cod Canal Engineers.

Wishing everybody the best of success, I am, as ever,

Yours in '08,

JOHN TOBIN.

IV. *Report of the Condition of the Treasury*

Through an oversight on the part of the person in whose hands the matter was left when your resident secretary went to Panama, no financial statement was published last year, so the statements for the last two years are now appended. It will be seen that there is a balance now on hand of \$136.52. No bills are outstanding. Though the treasury is now in a healthy condition, this should not deter any fellows from paying their dues, as in three more years it is proposed to publish our first year book, and this is an expensive undertaking.

FINANCIAL STATEMENT YEAR ENDING MAY 28, 1909

Receipts

Received from J. T. Tobin	\$32.83	
Received for 67 dinners, December 8	50.25	
Received for dues to May 28	95.10	\$178.18

Expenditures

Class Day Committee's unpaid bills	\$11.50	
Printing	17.50	
Office expense and part postage, paid to Alumni Association	33.50	
Sixty-eight dinners, December 8	40.80	
Postage (part)	6.31	
Collection charges by bank20	
Miscellaneous	2.55	
Balance	65.82	\$178.18

FINANCIAL STATEMENT YEAR ENDING JUNE 1, 1910

Receipts

Balance on hand May 28, 1909	\$65.82	
Receipts from dinner March 15	20.10	
Dues to June 1, 1910	158.20	\$244.12

Expenditures

Reunion expense	\$44.12	
Printing.	11.45	
Office expense and part postage paid to Alumni Association.	18.68	
Dinner of March 15	25.75	
Postage (part)	4.85	
Collection charges by bank	1.70	
Miscellaneous	1.05	
Balance	136.52	\$244.12

Results of Salary Canvass

The following paragraph is taken from the circular letter sent out by your resident secretary on February 28:—

Enclosed you will find a small envelope marked *Salary* and a white card and a blue card. Mark the amount of your salary on the blue card if you hold a degree from the Institute, and on the white card if not, place it in the envelope, and seal it. These envelopes will be turned over to the dean to be opened by him, and the results will be tabulated. Thus the amount of your salary will not be disclosed to any one. These data will be of particular interest for comparison with those which we shall get in 1913, when it is proposed to publish our first year book. The results this year will be published in the *REVIEW*.

In response to this request 126 replies were received up to June 2, when the envelopes were opened by the dean. Five of the cards turned in by graduate members are not included in the tabulation, as four reported no salary. One of these was engaged in research work, and another in graduate study. The fifth stated: "Working for myself in independent practice. Income not large yet." The average salary for ninety-two graduate members was \$1,152, and for twenty-nine non-graduate members, \$1,411. The total average of 121 members was \$1,213. The lowest reported by a graduate member was \$500, and the highest \$3,400. The lowest reported by a non-graduate member was \$624, and the highest \$4,000. The forty-sixth man on the graduate list—that is, the one numerically half-way between the highest and the lowest—received a salary of \$1,100. Similarly, the fifteenth man on the non-graduate list drew a salary of \$1,320. The graduate list is made up of all those men who were connected with the class of '08 who hold a degree from the Institute, whether given in '08 or not, and who have not requested the secretary to rate them with some other class. At present the number is 230. The number of non-graduate members is 359. This is made up of all men, non-graduates, who ever were connected with the class, who have not notified the secretary to rate them with some other class. It will be seen

that 40 per cent of the graduate members made returns, while but 8 per cent. of the non-graduates did so. Forty-eight men received a salary below the average on the graduate list, and forty-four men above the average. On the non-graduate list nineteen men received less than the average on that list, and ten men received more. For the two lists taken together forty-one men received more than the average, and eighty men less. As the average in this case was \$1,213, and twenty-one men reported salaries of just \$1,200, this is not so unbalanced as it seems. Before drawing any conclusions, it should be remembered that the non-graduates had an average of two years' start on the graduate members, and also that the class graduated in the midst of the panic of 1908. Also it seems to be in order to blame it on the comet.

Analysis of salaries, Class of 1908:—

	<i>Graduate Members</i>	<i>Non-graduate Members</i>	<i>Total</i>
Below \$750	11	3	14
\$750 to \$899	6	2	8
900 to 999	16	3	19
1,000 to \$1,099	12	2	14
1,100 to 1,199	3	1	4
1,200 to 1,299	21	3	24
1,300 to 1,399	6	5	11
1,400 to 1,499	2	0	2
1,500 to 1,599	8	4	12
1,600 to 1,799	1	0	1
1,800 to 1,999	1	3	4
2,000 to 2,199	1	0	1
2,200 to 2,399	1	0	1
2,400 and above	3	3	6
Total	92	29	121

VI. *Letters*

We hold the following man up as a shining example in the payment of dues:—

TUCSON, ARIZ., April 8, 1910.

About a month ago I received your letter regarding class matters, etc. I answered the letter, intending to enclose cash for class dues on my first trip to town. In some way I have lost track of the letter, and fear it may have got in with other mail, and gone on without the cash. So I will make sure of it this time by enclosing check for dues for 1909, '10, and '11, and ten cents for exchange. Also enclose application for associate membership in the Alumni Association, and will send cash for dues in that if they run me in.

Am now doing mining survey work in the Sieirita Mountains, thirty-five miles south-west of Tucson. Am dead in love with this country. May take up a ranch, and stick. The warm climate has partly thawed out the chill of the Boston weather and C's lectures.

Yours truly,

P. E. FERNALD.

—C. E. Hanson writes from the Connors State School of Agriculture, Warner, Okla., where he is teaching drawing and manual training:—

... Besides my work in teaching, I am superintending the construction of the main building, the farm barn and other smaller buildings. I intended to send you a photo of the building, but have misplaced it.

The State has retained me for the summer to superintend buildings in other places, so they seem to appreciate my work in that line. . . .

—Lock Davidson, bonded abstractor, Court House, Wichita, Kansas, writes under date of April 7.

... I was sorry that I could not attend the class dinner given March 15. I know I would have had a fine time meeting old acquaintances. I have not seen a "Tech" man since I left Boston in June of 1908, and it would certainly be a pleasure to be able to attend some of the class dinners; but, so long as I live so far away, I will not be permitted to partake of that pleasure. . . .

F. C. CENTRAL DE CORDOBA-EXTENSION A B. AIRES (CONSTRUCTION).

Buenos Aires, April 8, 1910.

Dear Weiler,—Enclosed please find the bone for my class dues. I would also like to know if I am a member of the Alumni Association or not. If not, would you kindly fix it up for me? I have already sent two dollars for REVIEW subscription, but, if you need any more, why just call on me. I received your letter and copy of the *Canal Record* from Panama, and was much interested.

As you see, I am still with the same company. I have considered changing once or twice, but I rather believe now that I shall stay here till this job is finished, which will be about a year from next June. By that time I hope to get in a trip home. Whether to stay or not, I can't say.

I believe, when I last wrote, I was outside, building cattle guards. Well, I finished that last August, and came back to the river here as assistant engineer. We are building a river wall of some eight kilometres in length along the shore of the river La Plata. Why it was called La Plata I don't know. I should say riv. de Barro (River of Mud) would be nearer right.

My job is almost entirely an outside one, which suits me very well. I have left my tent, and am now living in a box car, which is luxury here for a construction job.

Perhaps some of the fellows would like to know what the chances are in this country. For civil engineers, I should say they were very good. Technically trained men are none too common. There is also plenty of work at present, both under way and projected. Of course, a man is not of much use until he can speak Spanish to a certain degree, but you can usually get some kind of a job to keep you going until you pick up the language. I think it would surprise most Americans to look at a map of the Argentine railways, and see how they traverse the country in every direction.

As regards professions other than civil engineering, I cannot say so much. Civil work is mostly in the hands of the English. In other lines

there are Germans and French also. The street railways and electric and gas lighting are all in German hands. In architecture there are a good many French, but also many English. Manufacturers, there are practically none.

The Americans here do not form a very large proportion, but still there are quite a number of them numerically. They have a church which is called the American Church. It is nominally Methodist, but practically undenominational. There was also started last winter a United States Universities Club, with a membership of over a hundred.

I had the pleasure a short time ago of meeting a Tech man, Mr. Frank S. Badger, '93. He is at present with the London office of the J. G. White Company. We spent a very pleasant evening.

Well, remember me to any of the fellows you see, and tell them I should like to hear from them. I remain,

Sincerely,

(Signed) MONROE AMES.

VII. New Addresses

H. E. Allen, 2248 Parkwood Avenue, Toledo, Ohio, assistant to the general manager, Toledo Railway and Light Company.—P. B. Barrett, care of United Shoe Machinery Company, Montreal, P.Q., Canada.—Miss Mabel K. Babcock, landscape architect, 111 Washington Street, Wellesley Hills, Mass.—E. Jefts Beede, Hudson, Mass.—Harry H. Bentley, care of S. W. Mead, 15 Beacon Street, Boston, Mass.—Viggo E. Bird, care of Fall River Gas Company, Fall River, Mass.—J. M. Burch, Jr., care of Farley & Loetscher Manufacturing Company, Dubuque, Ia.—J. C. Brooks, manager, Westfield Marble and Sandstone Company, Westfield, Mass.—Charles J. Carter, instructor in mechanic arts, University of Maine, Orono, Me.—B. W. Cary has left the United States Patent Office, and is now with Phillips, Van Everen & Fish, patent attorneys, 53 State Street, Boston, Mass.—Clarence W. Clark is with the Bowker Insecticide Company, Boston, Mass. Home address, 26 Glenarm Street, Grove Hall, Mass.—A. S. Cohen, 1114 Gates Avenue, Brooklyn, N.Y.—F. A. Cole, care of Moore & Co., 12 Pemberton Square, Boston, Mass.—George A. Clatur, city engineer's office, Pawtucket, R.I.—B. S. Clayton, Young Men's Christian Association, Denver, Col.—W. F. Dolke, Jr., care of Postle, Mahler & Denson, architects, St. Paul, Minn.—H. W. Dun, Jr., care of supervisor of bridges, New York Central & Hudson River Railroad, Utica, N.Y.—Gregory M. Dexter has left Hazen & Whipple, and is now draughtsman and computer with the Oregon Short Line Railroad in the engineering department, Salt Lake City, Utah. Home address, 1268 East South Temple Street, Salt Lake City.—L. B. Ellis, transitman, Metropolitan Water Works, 1 Ashburton Place, Boston, Mass.—Paul A. Esten, leather chemist, rear 208 Summer Street, Boston, Mass.—Wilbur Everett, care of American

Telephone and Telegraph Company, 125 Milk Street, Boston, Mass.—Alan F. Edge, Corn Products Refining Company, Edgewater, N.J.—R. C. Folsom, Standard Refinery, Granite Street, Boston, Mass.—F. J. Friedman, heating and ventilating engineer, 50 East 20th Street, New York, N.Y.—W. C. Folsom, second assistant chemist and bacteriologist, Filtration Plant, Washington, D.C.—F. M. Fuller, treasurer, Duluth Show Case Company, Duluth, Minn.—R. W. Ferris, assistant engineer, Ohio State Board of Health, 909 Harrison Building, Columbus, Ohio.—Irving M. Guilford, care of Ball and Socket Manufacturing Company, West Cheshire, Conn.—M. B. Hall, transformer foreman, Wagner Electric and Manufacturing Company.—C. A. Harrington, assistant naval constructor, Navy Yard, Boston, Mass.—Lieutenant Lee Hagood, The Alexandra, Schenectady, N.Y.—W. R. Heilman, purchasing department, Peerless Motor Car Company of New York, 1758 Broadway, New York, N.Y.—Ira G. Hersey, Box 6, Hingham, Mass.—Paul H. Heimer, Massachusetts manager for "L. E. B. Shock Absorber," 35 Court Street, Boston, Mass.—Clarence L. Hussey, engineering department, The Rhode Island Company, Providence, R.I.—W. Armour Johnston, Jr., Prince Bay, New York, N.Y.—W. W. Karnan, chemist, United States Department of Agriculture, 1818 Wright Building, St. Louis, Mo.—C. C. Kinsman, care of the T. H. Symington Company, 616 Railway Exchange, Chicago, Ill. Home address, 5337 Ellis Avenue, Chicago, Ill.—Edward Kloborg, 21 Park Row, New York, N.Y.—Emerson F. Lyford, chemist, Cudahy Packing Company, South Omaha, Neb.—Frank E. Ludington, manager, Ludington Cigarette Machine Company, Waterbury, Conn.—R. E. Manning, 138 South Common Street, Lynn, Mass.—J. Worth Maxwell, Panulallo, Coquimbo, Chile.—W. D. Milne, Box 237, New Britain, Conn.—W. H. Medicott, 93 Water Street, Boston, Mass.—James McGowan, Jr., chief chemist, Joseph Campbell Company, Camden, N.J.—Everett H. Newhall, chemist, Revere Sugar Refinery, East Cambridge, Mass.—H. H. Palmer, assistant in physics, M. I. T., Boston, Mass.—Charlton D. Putnam, Metropolitan Park Commission, Providence, R.I.—Henry R. Putnam, United States Smelting, Refining and Mining Company, Kennett, Cal.—E. J. Riley, service department, River Works, General Electric Company, Lynn, Mass.—R. I. Ripley, 112 Cedar Street, Malden, Mass.—Miles Sampson, 56 Brook Street, Pawtucket, R.I.—Robert A. Schmucker, Red Hook, N.Y.—H. R. Sewell, sales engineer, Allis-Chalmers Company, Dallas, Tex.—Frank W. Sharman, care of Olmsted Brothers, Brookline, Mass.—Henry V. Spurr, 308 Mystic Street, Arlington, Mass.—Leo S. Stone, instrument-man, Charles River Basin Commission, 12 Bridge Street, Cambridge, Mass.—J. M. Talbot, care of S. S. White Manufacturing Company, Prince Bay, N.Y.—W. C. Taylor, Agricultural Experiment Station, Mayaguez,

Porto Rico.—Aram Torossian, 335 Washington Street, Norwich, Conn.—A. H. Turner, 4418 Pine Street, Philadelphia, Pa.—Harry Webb, care of W. H. McElwain Company, Eastside Factory, Manchester, N.H.—L. E. Wemple, 3927 Delmar Street, St. Louis, Mo.—Charles W. Whitmore, care of E. W. Pitman Company, Lawrence, Mass.—W. J. Barcus, 57 State Street, Albany, N.Y.—Alexander H. Bradford, 1454 East Harrison Street, Seattle, Wash.—H. S. Chandler, 1800 South Second Street, St. Louis, Mo.—Arthur O. Christensen, La Noria Development Company, Sombrerete, Zocatecas, Mexico.—R. C. Caryl, 49 Pearl Street, Bridgewater, Mass.—R. W. Davis, 521½ 63d Avenue, Milwaukee, Wis.—J. T. Gallagher, 1313 Girard Avenue, Philadelphia, Pa.—N. L. Hammond, 195 Lowell Avenue, Newtonville, Mass.—S. F. Hatch, Greenland, N.H.—Bradford B. Holmes, Whatcom County Railway and Light Company, Bellingham, Wash.—Russel T. Hyde, 33 Harris Street, Waltham, Mass.—O. S. Jennings, 427 Centre Street, Wilkinsburg, Pa.—B. S. Leslie, 38 La Salle Street, Chicago, Ill.—A. A. Longley, 26 Boylston Street, Jamaica Plain, Mass.—Alec N. Penny, care Ray Consolidated Copper Company, Kelvin, Ariz.—Joseph Pope, 822 Convention Street, Baton Rouge, La.—C. H. Spiehler, Rochester Railway and Light Company, Rochester, N.Y.—A. T. Scannell, 505 East Market Street, Alliance, Ohio.—W. H. Toppan, 12 Lafayette Avenue, Brooklyn, N.Y.—E. A. Turner, 2 Union Station, Terre Haute, Ind.—Francis M. Bond, who has been connected with the Office of Wood Preservation, Forestry Service, U.S. Department of Agriculture, Washington, D.C., is now on the laboratory staff of the new U.S. Forests' Products Laboratory, established by the government at the University of Wisconsin. Mr. Bond has charge of Wood Preservation.

1909.

CARL W. GRAM, *Sec.*, Mass. Inst. of Tech., Boston, Mass.

Only nineteen of the fellows got together at the American House for dinner on Monday, June 6. Those present were E. Q. Adams, J. C. Dort, F. R. Faulkner, R. H. Fellows, H. F. Foster, E. R. Hamilton, R. Inglee, W. H. Jones, T. D. Martin, K. May, L. D. Nisbet, J. W. Parker, F. G. Perry, M. R. Scharff, A. L. Shaw, L. C. Shaw, H. T. Shen, A. E. Thornley and E. E. Wells. Dinner began at seven, and did not break up until eleven o'clock. "Lew" Nisbet announced his engagement to Miss May B. Allen, of Providence, and to atone for this misdemeanor shelled out a box of cigars. By way of admonition never to repeat this offence, "Smut" was exiled to the chair of toastmaster, and unloaded a new collection of his choice bits. Each fellow in

turn related his experiences since leaving the 'Stute last June, and also told of any others of the class with whom he had come in contact. On Tuesday night several other fellows showed up at the Pops who could just as well have been at the class dinner, but forgot all about it. The ballots and dues have come in slowly. We are glad to find such a large number of fellows still doing their best to keep in touch with the class, but we wish more would follow their example. Every man who ever belonged to '09, whether for one term or for three years, is eligible for membership. Simply send the secretary \$1, and he will do the rest. The result of the elections is as follows: Mollie Scharff was elected resident secretary and class representative to the Alumni Council. With the exception of one blank ballot, it was voted unanimously to have an executive committee superintend the class business, and only five objected to the whole committee as nominated on the ballot. Therefore, the executive committee will consist of J. H. Critchett (XIV.), W. C. Ferguson (II.), J. I. Finnie (VI.), C. W. Gram (X.), G. A. Joslin (III.), M. R. Scharff (XI.), A. L. Shaw (I.), H. E. Whitaker (VI.).—Several more fellows have been married or announced their engagements within the last few weeks.—C. N. Harrub (XI.) was married April 27 to Miss Jessie A. Morrison, of Brockton, Mass. Daniel Belcher (II.), Robert Inglee (II.) and Herbert Marshall (II.) were ushers at the wedding. Harrub is now living in Mundale, Mass., where he is in charge of the water filtration plant for the city of Springfield.—On May 2 J. A. Willard was married to Miss Marion I. Hall, of Wrentham, Mass. They are now living in Trenton, N.J., where Willard is in charge of the testing department of the Trenton Iron Works.—Paul B. Lord (III.) has announced his engagement to Miss Emily Clark, of Boston.—Kevork Madenigian (I.) wishes us to announce his engagement to Miss Arshalyse Gabriel, of Union Hill, N.J.—Of the thirty-two '09 men who returned to the Institute as assistants last September, only a few expect to remain for another year. The others are leaving to take up work in various parts of the country.—Mollie Scharff will be back again as President's assistant, and will at the same time work for an M.S. degree.—Dick Ayres has been promoted to the position of instructor in heat measurements.—All of the assistants in mechanical engineering are leaving. Three of the assistants—Clifford (I.), Lovewell (I.) and Rue (I.)—in civil engineering are going to remain another year, T. G. Chapman (III.) of the mining department will return, while Connolly (V.) is the only chemist who will remain.—Gilbert (XI.) will probably be back as private assistant to Mrs. Richards.—M. D. Hersey has accepted the position of assistant physicist in the Bureau of Standards, Washington, D.C.

Among those who received the degrees of Master of Science were seven 1909 men: H. D. Bounetheau, H. M. Glazier, R. L.

Jones, A. G. Kellogg, L. H. King, F. Scheider, Jr., and L. S. Winchester.

Changes of Address

The following changes of address have been received: John H. Bossong, 429 80th Street, Bay Ridge, N.Y.—Kenneth E. Carpenter, 287 Pawtucket Avenue, Pawtucket, R.I.—John R. Carson, 104 Jay Street, Schenectady, N.Y.—R. L. Cary, care of Breed & Barrows, Boston, Mass.—J. A. Christie, care of George H. Foederer, Philadelphia, Pa.—Carl W. Gram, care of American Steel Foundries, East St. Louis, Ill.—Eugene L. Grunsky, 9 Vincent Place, Montclair, N.J.—Daniel F. Harriman, 1427 N Street, N.W., Washington, D.C.—Joseph W. Hathaway, 17 Prospect Street, Middleboro, Mass.—L. J. D. Healy, care of Boston Woven Hose Co., Cambridge, Mass.—William F. Jones, care of S. W. Jones, Mile Square Road, Yonkers, N.Y.—John F. McCarty, 590 Fourth Street, South Boston, Mass.—Kevork Madenigian, 163 Nesbit Street, Weehawken, N.J.—E. D. Merrill, R. F. D. 1, Box 96, Fort Collins, Col.—Henry U. Miller, P.O. Box 231, St. John, N.B.—Henry E. Myers, 10 Bowery Street, Akron, Ohio.—J. W. Nickerson, Saylesville Bleacheries, Saylesville, R.I.—R. L. Smith, care of John D. Baxter & Sons, Winchendon, Mass.—Goro Tomonaga, 12½ St. James Avenue, Boston, Mass.—Ray Van Eetvelde, 4 Palmerston Avenue, Brussels, Belgium.—Melville K. Weill, University Club, City of Mexico, Mex.—P. L. Adams, 558 Clinton Avenue, West Hoboken, N.J.—Daniel Belcher, 38 Academy Street, Winchendon, Mass.—Herbert H. Bennett, 869 Beacon Street, Boston, Mass.—Bion A. Bowman, 158 Newbury Street, Boston, Mass.—C. C. Carter, C.A.C., Fortress Monroe, Va.—Leland Clapper, 1224 Hughitt Avenue, Superior, Wis.—J. Cummings Dort, 2 Russel Avenue, Watertown, Mass.—Francis H. Dunnington, University Station, Charlottesville, Va.—Alan L. Edge, care of G. W. Laird, Cliffside, N.J.—John J. Elbert, 44 The Fenway, Boston, Mass.—Wilhelm G. Fick, 401 Fraser Street, Georgetown, S.C.—Fred M. Green, 488 Watertown Street, Newtonville, Mass.—Derick S. Hartshorn, New Boston, Mass.—Thomas F. Hickerson, Chapel Hill, N.C.—Robert Inglee, care of Carver Cotton Gin Company, East Bridgewater, Mass.—Frederick Jaeger, 1 Forest Street, North Cambridge, Mass.—Lewis H. Johnson, 125 North 44th Avenue, Chicago, Ill.—William H. Jones, 5 Sycamore Street, Worcester, Mass.—Alfred G. Kellogg, 51 St. Paul Street, Brookline, Mass.—Paul H. Lazenby, care of J. P. Ryerson & Sons, Rockwell and 16th Streets, Chicago, Ill.—John E. Lenox, care of C. B. Maguire Company, 48 Custom House Street, Providence, R.I.—Paul B. Lord, American Smelters Securities, Velardena, Durango, Mex.—Andrew L. Matte, North Adams, Mass.—Paul H. Mayer, 1126 Lafayette Street, Denver, Col.—R. W. Millard,

International Silver Company, Meriden, Conn.—George Miller, Minas del Tajo, Rosario Sinaloa, Mex.—J. Stewart Pearce, P.O. Box 556, Bartlesville, Okla.—Albert S. Peet, 91 Newbury Street, Boston Mass.—Joseph Pope, 822 Convention Street, Baton Rouge, La.—William C. Read, 11 Myrtle Street, Taunton, Mass.—R. O. Reed, Cortez Association Mining Company, Jacala Hidalago, Mex.—George H. Reppert, Technology Club, 17 Gramercy Park, New York city.—Rudolf W. Riefkohl, 534 Albany Building, Boston, Mass.—Clark S. Robinson, care of Sherwin-Williams Company, Cleveland, Ohio.—John Schaaf, 547 East Utica Street, Buffalo, N.Y.—Harold Schaffer, Victory Mining Company, Boise, Idaho.—J. Herschel Serra, 19 Halsey Street, Brooklyn, N.Y.—Thomas A. Tillard, Adhurst St. Mary, Petersfield, Hampshire, England.—Ernest L. P. Treuthardt, care of J. A. Cheape, Charlottesville, Va.—Harry Webb, 452 Lake Avenue, Manchester.—E. T. Williams, Jr., American Consulate, Nanking, China.—Claude T. Wilson, 223 Eastern Parkway, Brooklyn, N.Y.